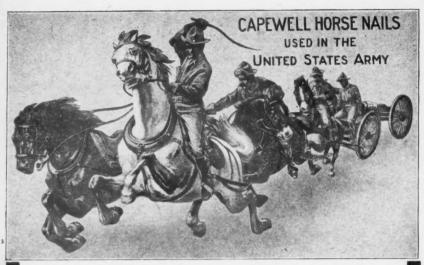
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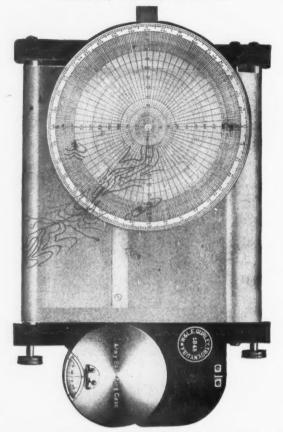
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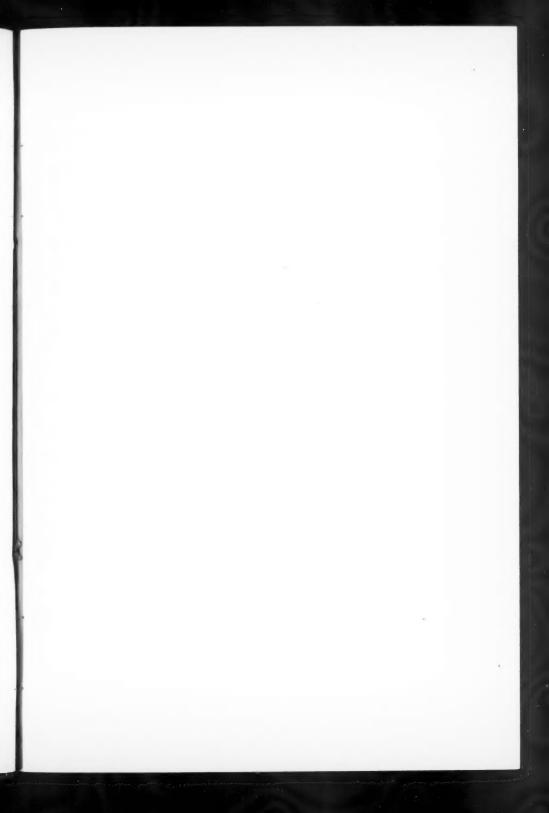
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#### CONTENTS FOR MAY, 1911.

	AGE
PSYCHOLOGY OF WAR-Captain Le R. Eltinge	
THE WORK OF THE CAVALRY EQUIPMENT BOARD	1053
CAVALRY EQUIPMENTS-Major M. F. STEELE	1077
A CRITICISM OF OUR CAVALRY DRILL REGULATIONS-Major H. H.	
SARGENT	1083
CAVALRY INSTRUCTION - Captain F. C. Marshall	1093
FIELD TRAINING VS. TARGET PRACTICE - First Lieutenant W. H. CLOP-	
TON,	1100
A PROPOSED METHOD OF LINKING AND DISMOUNTING TO FIGHT	
ON FOOT-Captain H. RUBOTTOM	1108
THE FORT RENO REMOUNT DEPOT-Veterinarian G. E. GRIFFIN	1115
THE CAVALRY OF THE BRITISH ARMY	1128
REPRINTS AND TRANSLATIONS:	
FIGHTING ON FOOT BY CAVALRY	1135
NEAR AND BATTLE RECONNAISSANCE OF DIVISIONAL CAVALRY	1141
International Horseshow	1150
THE BROOD MARE A FACTOR IN THE FRENCH REMOUNT SYSTEM	1158
BLOODED HORSES FOR THE CAVALRY	1162
MILITARY NOTES:	
A High Jump	1165
THE SEAT AT OBSTACLES.	1166
EFFORTS TO IMPROVE THE ARTILLERY HORSE IN FRANCE	1168
Horses for Our Cavalry	11669
THE REVOLVER.	1172
POLO IN THE ARMY	1174
INCIDENT IN AN ARGENTINE RIDING SCHOOL	1177
EDITOR'S TABLE	1178
BOOK REVIEWS.	1191
PUBLISHER'S NOTICES	1197

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#### PSYCHOLOGY OF WAR.\*

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#### Part I.†

"A doctrine of tactics which does not properly appreciate the psychological element stagnates in lifeless pedantry." (Balck.)

I N our studies, we have seen much about the psychology of war, but most of this has been in the nature of general reference to the subject, such as Napoleon's statement, "In war the moral is to the physical, as 3 to 1."

In our tactical problems we have been accustomed to assume that 100 men, equals 100 men. This is essentially *untrue*, and is used only because in theoretical exercises there is no other way of deciding the matter.

"In war there is nothing more important for a leader than the knowledge of the effect of certain things on the *human* mind." (Capt. Orr.)

<sup>\*</sup>Abbreviated from lectures on this subject given to the classes at the Army Service Schools by Captain LeRoy Eltinge, Fifteenth Cavalry.

<sup>†</sup>Prepared largely from Psychology of Peoples and The Crowd, both by Gustave LeBon.

"Leadership, to be efficient, must take account of all moral factors. Every leader of men, from a troop to an army, is necessarily a student of psychology, bound up as it is with the study of all moral forces which play so great a part in war. Not the least important, is a knowledge of the manner in which the opinions and beliefs of the men we are to lead in war may be affected by the ideas engendered during peace. The tendency in peace is to forget the importance of these forces. This is partly due to the fact that it is only under the stress of war that the more important moral factors betray themselves." (Capt. Orr.)

"On the actual field of battle, no two bodies of men of equal numbers (given equal tactical training, equipment and physical condition—itself an impossibility), have been, or ever will be, equal in moral force." (Rezanof.) On successive days even, the same body of men will break the first day with a loss of 5 per cent and the next, fight its way to victory, in spite of a loss of 40 per cent.

On the evening of the first day of the battle of Wagram Napoleon's right wing, possessed of a panic-like fright, fled.

\* \* On the very next day these same troops were the ones who by their heroic fighting won the battle.

At Winchester, the surprised Union troops fled in the morning but returned and won a victory before night.

There are two elements that enter to make these astonishing things possible—1st, Physical condition, 2d, Purely psychological conditions. The first to some extent, tends to produce the second. All psychologists agree that physical condition has a powerful effect on psychological susceptibility. A crowd of men that are tired, hungry, sick, thirsty or who have lost sleep, are much more susceptible to psychic suggestion, than the same men when in normal health and comfort. "As a general rule the soldier is rather hopeful. If he is well fed and has rested his spirits are good." (Soloviev.) With a crowd of men who are worn out, sick, exhausted, the slightest suggestion is liable to produce a quick and most profound effect. What the effect will be depends on the suggestion. This is the basis for Soult's statement "The soldier before dinner, and the soldier after dinner, are two entirely different beings."

Remembering then that poor physical or nervous condition, predisposes to psychic phenomena, we will approach the real reason why the same body of troops break easily today and fight like heroes tomorrow, which is, that soldiers in battle have the same mental characteristics as a crowd, and a crowd is easily swaved. On the first day the wrong influence swayed the crowd of soldiers. On that day some man said, "We are outflanked," or "The enemy is in our rear," and the whole crowd ran-no one looked to see if the report were true,-most of the men had not even heard the report, but by a sort of mental telepathy, they realized that the crowd was running away, and they ran also. They did not know why they ran, where they were running to, and most were even unconscious that they were running. On the next day they were just as easily swayed. right man at the right time put in the suggestion that "We have them going now,"-"Our other battalion is in their rear, and we will push them back and capture the whole outfit."-"Come on, let us rush them." Exactly the same kind of blind rush, which yesterday they made to the rear, is today made, but it is made to the front. Losses are not noticed, the collective brain of the crowd is now centered on doing damage, and it forgets for the time, that it is also suffering loss. When an officer commands on the firing line, he must realize that his men are just a crowd, and that they must be handled like a crowd, not like the calm, respectful, obedient soldier of the drill ground.

#### SUGGESTION.

By suggestion is meant, as far as we are concerned with the subject, the implanting of an image in men's brains that will impel them to certain acts, but without direct commands.

We know how a street faker will extol the virtues of his wares till we feel impelled to buy, even though, if we thought calmly, we would know we do not want them.

In company one yawns. Many of the rest at once follow suit.

These are examples of suggestion, one by words, the other by an act.

In neither case was there a command, and precisely for that reason the effect was less to be resisted. In either case a direct order would have failed to be effective.

To a person in a normal state of mind the strength of the suggestion is dependent on the following factors:

- 1. Last impression—that is, of several impressions the last is most likely to be acted upon.
- 2. Frequency—that is, repetitions, not one after the other but at intervals separated by other impressions.
- 3. Repetition—this is distinguished from frequency by being repetitions one after the other without having other kinds of impressions put in between.

"Repetition" is one-third as powerful as "frequency," and one-fifth as powerful as "last impression."

4. The strongest suggestion is obtained by a combination of "frequency" and "last impression." (Sidis.)

The above conclusions are the result of a large number of laboratory experiments.

## PSYCHOLOGY OF CROWDS.

The minds of an aggregation of soldiers are influenced in the same way that the mind of any other crowd is influenced.

"Anyone, taken as an individual, is tolerably sensible and reasonable. As a member of a crowd he at once becomes a blockhead." (Schiller.)

In its ordinary sense the word "crowd" means a gathering of individuals of whatever nationality, profession, or sex; whatever be the chances that have brought them together. From the psychological point of view, the expression "crowd" assumes quite a different signification. Under certain given circumstances, and only under these circumstances, an agglomeration of men, presents new characteristics very different from those of the individuals composing it. "The sentiments and ideas of all the persons in the gathering take one and the same direction, and their conscious personality vanishes. A collective mind is formed, doubtless transitory, but presenting very clearly defined characteristics. The gathering has thus become what, in the absence of a better expression, I will call an organized crowd, or a psychological crowd. It forms a

single being, and is subjected to the law of mental unity of crowds." (Le Bon—"The Crowd.")

"A thousand individuals accidentally gathered in a public place without any specific object in no way constitute a psychological crowd. To acquire the special characteristics of such a crowd, the influence of certain predisposing causes is necessary. The disappearance of conscious personality, and the turning of feelings and thoughts in a different direction, are the primary characteristics of a crowd about to become 'organized.' An entire nation, or an entire religious sect, though there may be no visible agglomeration, may become a crowd under the action of certain influences.

"It is well known that, in a crowd, a sudden impulse will affect men and produce curiously concerted action. The knowledge of this 'psychology of crowds' has often been used by leaders of men. After all, an army is a crowd with a common training, and therefore easier to move than any other crowd to unanimous action. Hence the spirit which impels an advance, or a passive defense or a retirement, may well have been transmitted by the leaders." (Capt. Orr.)

Von Moltke implanted the idea of the "spirit of the offensive" in the minds of the whole German army. The leader whose own ideas are not clearly defined and whose intention is vascillating will get only half-hearted action from his troops while, on the other hand, a determined man who has one clear idea will himself be surprised to see how the troops respond.

In a crowd each individual becomes a grain in the heap. He loses all his former characteristics and assumes, individually, the characteristics of a member of the crowd.

"Effects of crowds can be traced everywhere, at all times, and in all phases of human life, whether political, religious or social. Not seldom, as in the French Revolution, or the Crusades, have these effects been felt all over the civilized world."

Now what are the inborn attributes of crowds? No matter what the individuality of the people forming a crowd, how similar or dissimilar their modes of life, their occupation, their character or their intelligence, by the mere fact of merging into a crowd they form a sort of collective soul, by means of which they feel, act and think in a manner different from what each

individual would, if left to himself. "There are ideas which appear in the collective mind of the crowd that do not appear in the minds of the individuals who form that crowd."

"The chief point to remember is that a crowd's mind is not the average of the sum of the minds of its individuals, but a combination followed by the creation of new characteristics." (Capt. Orr.)

Several causes may be attributed to bring about the change from personal character to the character of the crowd, which latter is often in the utmost contrast to the former.

The first of these causes consists of the fact that in each individual of the crowd there arises, based on the mere fact of being in numbers, a feeling of invincible power, which at once nullifies the feeling of personal responsibility and which may further lead to a line of action never thought of were the individual alone or at his usual avocation, or which, if thought of, would have been curbed.

"Much will power is required to oppose the actions of a crowd of which we form a part; only a very few people possess that energy."

We all know that strong action comes from a single strong leader. As Napoleon said, "Councils of war never fight."

The second cause of crowd-sentiment and crowd-treatment lies in *imitation*. Even with animals, imitation plays a great role and that, not only with mammals, but also with the lower orders. It is well known that the barking of a single dog immediately induces all dogs in the neighborhood to bark. The desire to imitate is not less strong in the human being than in animals. Fashion in dress is a good illustration.

"The undeniable fact of imitation, so closely interwoven with our daily life, is intimately connected with another general human characteristic, namely, the suggestibility or psychological power of contagion, which in many individuals amounts to hypnotism." (The Crowd.)

"As a rule man by merely belonging to an organized crowd descends in the matter of civilization. By himself he is an educated individual, as a member of a crowd he has the fingermarks of the crowd. This is one of the main reasons why, what in strikes start out to be peaceable meetings to dis-

cuss grievances, sooner or later lead to mob violence." This fact has been understood for hundreds of years. A Roman emperor said, "The senators are courageous people—the senate is a beast."

A German writer has said, "One is a man, several are people, many are animals."

To get down to the things that are of use to us, I will quote from LeBon, the ways in which a crowd can be led. (The Crowd, page 141 and following):

1. "When it is wanted to stir up a crowd for a short space of time, to induce it to commit an act of any nature—to pillage a palace, or die in defense of a stronghold or a barricade, for instance—the crowd must be acted upon by rapid suggestions, among which example is the most powerful in its effect. To attain this end, however, it is necessary that the crowd should have been previously prepared by certain circumstances, and above all, that he who wishes to work upon it should possess the quality to be studied further on, to which I have given the name of prestige.

2. "When however it is proposed to imbue the mind of a crowd with ideas and beliefs—with modern social theories, for instance—the leaders have recourse to different expedients. The principal of them are three in number and clearly defined—affirmation, repetition, and contagion. Their action is somewhat slow, but its effects, once produced are very lasting.

"Affirmation pure and simple, kept free of all reasoning and all proof, is one of the surest means of making an idea enter the mind of crowds. The more concise an affirmation is, the more destitute of every appearance of proof and demonstration, the more weight it carries." (The Crowd.) "Statesmen called upon to defend a political cause, and commercial men pushing the sale of their products by means of advertising, are acquainted with the value of affirmation." (The Crowd.)

When the thing affirmed is at intervals heard again and again it comes to sound natural and soon is accepted as being true. No one remembers who was the original author of the statement. When this has happened and the repetitions begin to be repeated and spread by others than the originators, then "Contagion" has intervened.

"Ideas, sentiments, emotions and beliefs possess in crowds a contagious power as intense as that of microbes." (The Crowd.)

The opinions and beliefs of crowds are specially propagated by contagion, but never by reasoning.

#### PRESTIGE.

"Great power is given to ideas propagated by affirmation, repetition, and contagion by the circumstance that they acquire in time that mysterious force known as prestige.

"Whatever has been the ruling power in the world, whether it be ideas or men, has, in the main, enforced its authority by means of that irresistible force known as 'prestige.' The term is one whose meaning is grasped by everybody, but the word is employed in ways too different for it to be easy to define it. Prestige may involve such sentiments as admiration or fear. Occasionally even these sentiments are its basis, but it can perfectly well exist without them. The greatest measure of prestige is possessed by the dead, by beings, that is, of whom we do not stand in fear—by Alexander, Cæsar, Mahomet, and Buddha, for example." (The Crowd.)

Prestige, in reality, is a sort of domination exercised on our mind by an individual, a work, or an idea. This domination entirely paralyzes our critical faculty, and fills our soul with astonishment and respect. The sentiment provoked is inexplicable, like all sentiments.

### PSYCHOLOGY OF RACES.

The psychologist distinguishes between peoples by their main mental, just as the naturalist distinguishes between species by a few main physical, characteristics. The superior degree of will power, indomitable energy, great initiative, absolute self-control and strong sentiment of independence of the pure Anglo-Saxon distinguishes him from other human beings just as fins and gills distinguished the fish from other vertebrates. A fish may be large or small; chunky or slim; red, white, blue, black, or drab; live in salt or fresh water; have eyes or be sightless; and prey on others or not, but if he has fins and gills

he is a fish. All the non-essentials may be changed by environment, but the essential characteristics remain, being subject to change only by the slow transformations of evolution that require countless ages for their completion. So the main mental characteristics of a race are their inheritance from countless generations of dead ancestors and change very slowly or remain unchanged under the influence of education and environment.

"The influence of environment only become effective when heredity has caused their action to be continued in the same direction for a long period." (LeBon, Psychology of Peoples, p. 9.)

So great is the mental difference between different peoples that they can never fully understand one another. You think with not only a different brain but a different kind of brain than does your Filipino servant. The impression that a series of words or a series of events makes on your brain differs from that made on his brain by the same words or events. This is so marked that it is impossible to accurately translate any idea from one language to another. For example, the dictionaries give pan (Spanish) and bread (English) as equivalent. To you the word "bread" brings to mind a mental picture of a large loaf, made without much if any lard and with a small proportion of crust and much soft interior, but to the Spaniard the word "pan" brings up a mental picture of a small hard loaf, all crust and made with much lard.

In a similar manner events make different impressions on different kinds of brains.

Education and environment may quickly change the more noticeable expressions of a brain but they do not change its kind.

In ten years a fairly intelligent Japanese can acquire all the education and exterior social graces of an Englishman. To transform the Japanese so that a series of events would give him the same mental picture that they give to an Englishman a thousand years would not be sufficient.

We think with much the same kind of a brain as does the Englishman. Given a particular set of circumstances we can predict within one or two alternative lines of action just what an Englishman will do, but what a Japanese, a Chinaman or a Filipino will do under these circumstances, or why, is entirely beyond our comprehension. By association with one of these peoples we may come to know more nearly what they will do but never why.

As a practical measure, we, in the United States, have today to deal with the mixture of many different kinds of peoples.

The Anglo-Saxon and allied stock we had before the Civil War. We know them and know what they will do in war. Now for military purposes let us consider the rest.

First we have taken in the negro. There are something like 11,000,000 of him. By association we know something of what he will do but, as we think with a different kind of brain, we do not perceive the why of his acts. In other words we will not be able to get the best out of him as a soldier because we do not understand how to touch the mainspring of his character.

Another large proportion of our population is made up from the Jews. It is said that there are today more Jews in Chicago than in Palestine. For generations the Jew has been a trader. He has not been a soldier for over 2,000 years. For the same length of time he has preferred trading to doing work with his hands, and has had no country. He does not know what patriotism means. The soldier's lot is hard physical work. This the Jew despises. None of the qualities of the good soldier are exemplified by him. Nevertheless he is highly religious and very susceptible to the moral sentiments that are characteristic of his race. He has tenacity of purpose and under pressure can patiently endure much. In a cause which appealed to his peculiar kind of mind and led by officers who knew how to get the best out of him he might do surprisingly well as a soldier, but unless we can touch the latent mainsprings of character that 2,500 years ago made him a soldier to be respected we will find him of little account.

Another large proportion of our citizens come from southern Europe. Their number is increasing each year. These men have the mental characteristics that Napoleon's soldiers had. One of the principal of these is the instinctive demand

for a leader more than for a cause. The cause gets the vocal allegiance but they follow a leader, not an idea. We laugh at the harangues that Napoleon made use of in order to raise his subjects to enthusiasm in his service, but we will now have in our armies a considerable proportion of men with just the mental characteristics of those same subjects. We do not understand their brains. From the same events or words we do not get the same mental picture that they do.

The Anglo-Saxon fights stubbornly in defeat. The Latin makes a more enthusiastic and dangerous attack but sinks into the deepest dejection and hopelessness under a reverse.

A big war will now make it necessary to combine all these unfusible elements into one whole,

The organization, the methods, the leaders that suit one part will be unsuitable to the others. Today it is impossible to think of an idea which would make a strong mental and psychological impression on the *whole mass* of the population. It is therefore improbable that the Civil War can furnish any reliable information as to what we may expect our people to accomplish today.

# Part II.

## PANIC IN WAR. \*

BY panic we understand the sudden, precipitate, unreasoning fright taking possession of a crowd, which unlike fear or fright originating in the depth of the individual human mind, cannot be combated or curbed by reasoning.

Such a fright, which may have its origin possibly in an utterly unimportant happening in a crowd, suddenly calls into existence the crudest features of self-preservation, features which existed from time immemorial in the human race, but

<sup>\*</sup>Prepared mostly from an article in "Revue d'Infanterie" of November, 1907, translated in Military Information Document No. 12149, of School Library file, and an article by Colonel Emil Pfluelf on the same subject, translated from the German.

which were overcome by advancing civilization; such a fright entirely fills the human mind by driving into the background every other feeling; governs the movements of and drives the crowd, causing each individual of the crowd to lose his power of judgment, reasoning and self-command, and leads it, incapable of resistance, into purely brute actions.

In the psychological crowd, the individual is no longer himself; he feels and acts but in the sense of the "collective

soul" and shares its peculiarities and desires.

That under such conditions all bounds set by education, culture and reason are driven into the background; that the "human beast" comes to the surface is self-evident.

The study of cases of panic, which have occurred at various times and in various armies, shows that if, in combat, the determining cause of the evil has always been the same, namely, a powerful suggestion in the form of a cry or gesture, yet the real cause, concealed behind the apparent one, is an unexpected modification in the physical or moral conditions affecting the trops, a modification which resulted in diminishing or destroying their resistance to suggestion.

In campaign, this resisting force is subject to incessant fluctuations, according to circumstances, the condition of the troops, and their sentiments. We shall see that these sentiments, even the best of them, are far from being able to balance this devastating and blind force of panic.

From no source do we find any attempt to explain the characteristics of the phenomena of panic. At times, experience has shown to commanders palliatives of a moral kind, but generally the one remedy understood and made use of was sanguinary repression. In all ages military commanders have dreaded panic as a scourge.

In the ancient battles, as DuPicq has shown, "panic was the inevitable issue, and he was victor who was able to resist it the longer." The ancient commanders attempted to conquer by instilling in the soldier the dominating fear of their own commanders. It was necessary, according to a Greek commander, "that the soldier fear his captain more than the enemy."

Indeed it is a fact that in war success often depends less upon the skill of the combinations than upon the stubbornness of the combatants. Still, it is necessary that this stubbornness be general, for panic of a few men can, in an instant, destroy the tenacity of the greatest number.

Panic derives its birth and is developed in manners always identical, which can be described in a few words. Troops in the peculiar crowd state, brought into being by the combat, in anticipation of the combat or later as a result of the combat, are broken up in consequence of a cry of distress that is repeated by a few men who accompany it with gestures of terror and run away in one or several directions, habitually away from the enemy, blind with fear and deaf to every voice.

Such was the panic that seized the Prussians on the evening of Jena. At the cry "Save himself who can," a sudden panic took possession of every soul. They took to running confusedly on the roads, seeing enemy everywhere and taking fugitives, themselves full of fright, for victorious Frenchmen. The cavalry turned out of the roads and took to the fields by whole squadrons. The infantry broke ranks, looting and overturning the baggage.

After the First Bull Run the beaten troops fled in utter route by the way they had come. They ran back by Sudley Springs, though they could have saved many miles by cutting straight across. This wild scramble kept up all night till they reached Washington. Yet no one pursued. The drawn faces and utter exhaustion of the stragglers as they arrived in Washington have often been described. The physical exertion they had undergone would account for their personal appearance, but the descriptions of all other panics contain the same notice of the drawn faces and the utter exhaustion of those who have been in a panic. In order to arrive at a conception of panic, one must consider certain phenomena still little understood. These are illusion, hallucination, suggestion and contagion.

Panic is indeed a sort of collective hallucination. Illusion and hallucination are both at first individual and are manifested in the subjects who are the most nervous, the most impressionable, or the most depressed physically. By their gestures and cries they offer suggestions to their immediate neighbors. Then contagion does its work with frightful rapidity.

Let us examine a few details of these different phenomena. "Illusion is an error which simulates actual knowledge, evident in itself or intuitive in the form of a perception of the senses." (Sully). It has, therefore, for a point of departure a real impression. For example, a sentinel sees a bush and

hears it rustle in the breeze. He really sees something, but believes that he sees an enemy sneaking up to kill him.

Of this nature was the phenomena which caused the Russian fleet to mistake peaceful fishing vessels off the coast of England for Japanese torpedo craft.

In hallucination, on the contrary, there is no real impression. A person who pictures to himself the face of a friend or of an enemy so vividly that he believes he sees him for a few moments is a victim of hallucination.

Under the influence of the nervous over-excitement of the battlefield such phenomena are frequent. Every one who was gone to war has verified it.

The commanders, themselves, being more imaginative and having their attention constantly under strain, are frequently the victims of illusion and hallucination. That is what a French General wished to say in 1870, when he said to his chiefs of information: "You have Prussians in your eyes."

A curious example of hallucination in the chief is that of the brigade commander Felix. During the campaign of 1793, while posted in an advance position, he abandoned his detachment before the first shot was fired and fled whip and spur to headquarters (13 miles) where he asserted that his troops had been annihilated by the enemy.

This officer had previously distinguished himself for bravery.

On examination it was found that, though there had been a fight, it had not been a serious affair and the commander was the only one who had fled.

In an army a few individuals become thus victims of illusion or hallucination, and so are created the first germs of panic.

Obsessed by the image he believes he sees and lost to all

notion of the outside world, the victim immediately exerts all his energy and all his power to obey the feeling of attraction or repulsion which the image imperiously impose upon him. When seized by fear, his features become convulsed, he conceals his frenzied eyes with his arms to escape the horrible vision, and his mouth utters cries of fright. It is then that is introduced the phenomena of *suggestion*. This phenomena of suggestion is well understood by military commanders, who know that conformably to suggestion, soldiers will dash to the assault of a position with an irresistible impetuosity.

Unfortunately, suggestion does not always come from chiefs and is not always directed in the channel of duty and the safety of the army. Nor is it of less effect on this account; for, under its influence—and this is a point to be noticed—the soldier will abandon himself to shameful flight as well as to heroic assault.

"The spectre of panic stalks by the side of enthusiasm." (Balck.)

In the crisis of the fight, the action of suggestion would not be so formidable if it could be localized and if it could be made to influence the minds of only the nearest neighbors.

But this is not the case by any means; for contagion soon intervenes to disseminate the influence with incredible rapidity. "It is a phenomenon often verified, but unexplained, that every act, every sentiment in a crowd is contagious, and contagious to a point where the individual very easily sacrifices his personal interests for those of the collective body." (Le Bon.) In an instant, contagion carries fright to the bravest hearts, destroys the faculty of reasoning, and brings all of the intellects to the same level.

Thus the reading of the accounts of dramatic panics depicts only the image of a furious, fleeing, unconscious beast, seeking an instinctive shelter from the storm in ravines, woods, villages and mountains, which nature and the industry of man have prepared for the refuge of beings threatened with an imminent danger. With men in a panic, they are seen, after being well started, to herd together in sombre silence, their faces reflecting their sinister fright. After the first start, they

press on in silence, their eyes cast obstinately on the ground. Crushed by fatigue, they throw away knapsacks, hats, rifles, canteens—anything that impedes their progress. The descriptions of all panics dwell more or less on the utter exhaustion of those who have participated therein. It appears to be a result, not of the physical exertion they have undergone, but of the nervous excitement and nervous strain.

In panic before the final stage there are cries, inarticulate, but still human sounds. When a panic has continued for a longer time, the mass settles into sombre silence, utter weariness, and hurrying along in profound dejection is even less possible to control than when the first rush started.

We have seen that troops seized with panic had received through suggestion an extremely vivid impression and that hallucination presents to the eyes of each soldier a frightful danger.

Immediately, by a psychological law, the organs involuntarily react to avoid the danger and with all the more violence because the exciting influence has been most vivid. Then ensue disordered actions causing the man, in order to rid himself of every obstacle to his flight, to precipitate himself upon his neighbors with a frenzy that extends sometimes even to murder, and to hurl himself upon obstacles which he can neither clear nor overturn.

It has been proved, moreover, that strong emotions lead to serious perturbations of the respiratory system in consequence of a disturbance of the nervous centers, the mechanism of which is not known,

Respiratory disorders likewise cause an extremely rapid fatigue even at the time when the troops have just begun movement, and the details of this fatigue fill the accounts of panic. We see soldiers strew unconsciously over fields everything hindering them, everything added to their fatigue or bowing them down. This thing is certain and is seen in every panic.

It can be said, indeed, that from the instant when cries of fright become general, when all feelings and all thoughts are directed toward the one end, flight, troops have acquired a physiognomy entirely new, and there are manifested in them characteristics peculiar to this state.

This annihilation of the intellectual faculties shows of what little importance, from the special viewpoint of panic, is the coefficient of intelligence sometimes spoken of as one of the great advantages of our American army. Remembering that the army that can longest resist panic is the victor and that crowds and especially crowds under strong excitement are the same no matter what the grade of intelligence of the individuals composing the crowd, it seems that, except in the way of leaders, intelligence is of little value in war.

Troops seized by panic are so incapable of the least reason that even the sense of direction often leaves them; and it is not rare to see soldiers dash into the ranks of the enemy with such gestures of terror that fear overcomes the adversary also. Troops overcome by fright are totally deprived of the critical sense, and so one of the consequences of the loss of reason is the creation of an extraordinary credulity. It is thus that a rumor, known at once to be false if one but stopped to think, will frequently turn a retreat into a demoralized rout.

It is not the courage of the individual which is changed into the most imbecile cowardice, but this change takes place in the mind of the crowd. The individual minds have ceased to exist—the crowd has a single mind of its own, separate and distinct from the minds of the individuals composing it. Troops composed of men of proved individual courage will not be inaccessible to collective fear. The gladiators of Spartacus, in revolt, were put into full rout by an army of soldiers of little individual courage, but of better organization and leadership.

We thus see that physical depression, loss of the faculty of reasoning, the unleashing of primitive instincts and sentiments, are the essential characteristics of men seized by the crisis of fear. They become easy preys to their adversaries, who need only to have enough physical power to strike in order to slaughter them.

Pursuit under these conditions becomes a sort of cruel play; a chase where the pursuer has no longer anything to dread for himself excepting fatigue. As DuPicq has shown us, in the ancient battles the winner lost a few hundred; the loser fifty or a hundred thousand. Here the losses must have been about equal till the break. Then one side, overcome by

panic, fled, and the victors without further fighting, had but to follow along and kill the helpless panic-stricken mob.

## FACTORS IN PANICS.

In order that troops may be influenced in an irresistible manner by the suggestion of fear, we have said that it was necessary that they be placed previously in a condition favorable to the contagion of the suggestion. This state of predisposition is brought about by two series of factors:

- 1. Immediate factors, events, almost always unforeseen, which often pave the way for panic in a few minutes, without in themselves causing it.
- 2. Indirect factors, those which, operating for a time more or less extended, have created a soil favorable to its development.

Among the first may be mentioned treachery, the absence or scarcity of arms, the absence of the commander, surprise, and expectant waiting. Among the second, race, physical depression and moral depression.

The definition of treachery we all know. When it occurs with troops while waging hostile battle, even if they have already accomplished prodigies of valor, even if they are in full victory, and even if treason be the act of only a few isolated individuals, yet demoralization becomes almost inevitable.

It is a fact that the reasonings of collectives operate only by the association of images and by generalizations, often absurd.

The image of treachery is first erected before the frightened soldier who sees himself surrounded to his ruin by maddened traitors. Let the cry of treason be raised and the deed is done; panic is let loose.

The lack of arms gives the soldier the impression of being delivered over to the enemy with feet and hands bound. We have a curious example of this in the combat of Saint-Hermagor, where Major Roulier was abandoned by all his men because the muskets were, on account of rain, no longer able to be fired. The enemy was, of course, in exactly the same fix. An individual would have known this at once, but the crowd with the usual lack of reasoning qualities inherent in

crowds, and the extreme egoism of crowds, thought only of itself and its own plight.

The absence of chiefs disarranges the bearings of troops, accustomed to act only upon orders and having for direction only the will and judgment of the chief. The latter appears in the eyes of all as the one person who understands the military task and is capable of directing affairs.

Action by surprise is recommended by all tacticians; for its power to demoralize the enemy is a considerable force in the hands of the assailant. It suppresses, indeed, in the one who encounters it, not only the possibility of maneuvering, but also that of measuring the extent of the danger threatening him. At the same time it removes the two factors necessary to all reasoning, time and calmness. Peril then appears all the more frightful, because it is sudden and apparently inevitable. Before having suffered even the first ill, troops are morally turned foot-loose and are ripe for panic, which is propagated by contagion in a very few minutes.

The phenomena of anxious expectancy explains the numerous shots that sentinels in the field fire during the night at bushes and trees, which they take for the enemy's patrols. It explains also why reserve battalions during battle, having before their mind's eye the spectacle less the animation of the struggle, retreat without even waiting for their entrance into the fighting line.

The above are immediate factors of panic. They often influence troops independently, but often they are grafted on the indirect factors, which favor their action, and therefore take a preponderating part in the origin of panic.

From this point of view, that unchangeable soil from which spring all our sentiments, race, has a capital importance. It is upon it that depend in great part the impulsiveness of troops, their variableness and their susceptibility to suggestion.

Physical wretchedness is one of the most rapid agents of demoralization. By physical wretchedness must be understood, not only the absence of rations, but also the fatigues resulting from marches and combats and the anemia that so rapidly overcomes troops in campaign. Among the causes that create a soil suitable for hallucination and illusion may be cited excessive

fatigue, hunger or thirst, strong mental tension, profound mental or bodily exhaustion and morbidly emotional conditions such as fear. Panic, the daughter of hallucination, becomes extremely frequent with troops physically depressed.

When to physical suffering is added demoralization, when wretchedness breaks down the body and defeat undermines the courage, panic becomes the uncontested mistress, before whom the commanders themselves bow, repulsing the idea of battle, in order to avoid irreparable disaster.

It has been justly said that moral forces are the preponderating ones in war. Moral force, which gives to troops the will to surmount all obstacles, to dread no danger, and to desire to conquer at any price, springs from sentiments, varying according to circumstances, which animate soldiers and place them in a condition to be influenced by the suggestion of victory in combat.

In a general way these sentiments are religious fanaticism, patriotism, enthusiasm for a commander, discipline and most of all confidence resulting from experience.

### CONCLUSIONS.

After having reviewed the different causes of panic, there still remains for us to determine whether or not there are practical means for rendering them less frequent; of lessening their effects, and of checking them after the evil has been produced.

Among the indirect and immediate causes of panics, it is evident that several, such as race, are beyond control, or such as treason and surprise, cannot be foreseen. If known in advance, they could not exist.

Against these factors of panic only general preventive measures, designed to render them less frequent, can be taken. We must therefore resign ourselves to submit to them as an inevitable evil.

Other factors, on the contrary, depend upon the commander, who is able, within certain limits, to suppress them.

It is a question of understanding troops, of administrative diligence, of discipline; and it is especially in this respect that past experience imparts instruction. Thus the panic of the Tuileries, in the battle of LeMans, demonstrates conclusively that it would be preferable to leave at home men who were neither armed nor instructed, rather than to lead them into combat, where they become a center of extremely dangerous demoralization.

These chances would be still further reduced if troops be drilled to fight according to methods appropriate to their racial temperaments. It is necessary, indeed, that instruction, while taking into account arms, terrain, situations and numerical strength, be based upon the moral forces of the combatants. The penalty for doing otherwise is to find them useless on the day of battle.

Man is but little changeable, but little transformable. It is therefore from perfect knowledge of *him* that tactics must especially be derived, and that mathematical theories must be met.

Panic is an aberration of assemblages of men, an actual scourge, of which tactics must take account.

With this in view, the following principles can be deduced from what has preceded:

- 1. Joint responsibility and confidence are two essential factors for steadfastness of troops in combat and for their resistance to panic.
- 2. Troops must fight in the organization they are used to in time of peace, each man in his habitual place and with his proper unit.

In order that a man or troops may fight energetically, without apprehension, it is necessary that there be protection on both sides and in rear.

Consequently, reserves should not be too far distant from the fighting line in order that they may give the latter confidence by their promptness in supporting.

3. The different arms must give each other constant support. The artillery, especially, the effect of whose fire is universally recognized, should support the infantry from near points, and should march, so to speak, in the midst of them. The soldier in combat must never feel himself isolated or separated from his brothers in arms.

4. The best troops, those whose steadfastness is assured, should be placed on the second line. Those who are struggling directly with the enemy have in action a powerful deterrent from emotion, namely, the centering of their attention on the incidents of the fight, without it being possible for them to think about their own personality.

If the best troops be placed in the first line the least recoil on their part causes the disintegration of the reserves.

5. Adequate ammunition supply is absolutely essential. Troops out of ammunition can not and will not fight, except at the very closest range. Such troops will not only break themselves, but their panic will, by contagion, be spread to their neighbors.

To avoid surprise at any cost, troops should not only cover themselves in all directions from which the enemy may approach, but they should also, if possible, be warned in advance of the probable incidents of the combat.

Morgan, at Cowpens, realizing that his militia was going to flee anyway, told them to fire a volley or two and then run. They did this, and thus everything being expected, they were so encouraged that they had the nerve to come back and materially assisted in winning the victory.

Complete supply and organization, providing largely against material wants, appropriate tactics, and instructed nucleii of the units are the elements in troops, other than valor, suitable for warding off panics. These elements, which, added to discipline, endurance and exalted morale, constitute an appreciable force, are still insufficient in themselves. Only joint responsibility, born of experience in war, can ever offer an impenetrable resistance to the contagion of fear. Therefore, panics among troops will occur, whatever the cares the commander may have taken to prevent them.

"Collectives are the plaything of all exterior excitants, and the latter's incessant fluctuations are reflected in them. They are the slaves of impulses they receive." It follows that troops influenced by suggestion to panic can, if a sufficiently strong will be imposed upon them, receive an absolutely contrary suggestion, which they will obey with the same docility that they did the first one. History is full of deeds where the attitude of a chief, a happy word or a gesture have changed in an instant the sentiments of troops.

Washington, at Princeton, rode out between the lines and sat on his horse fully exposed to the volleys of both sides; this steadied his men. It is not the words, which few if any hear, nor the gesture, which more, but not a large percentage of the whole, see, that brings back the whole mass. It is the words or gestures that influence a few—then contagion spreads the effect through the mass, which knows no more why it came back than why it first started to fly.

Prestige is the first element of the habit of obedience. It causes the acceptance of an idea without discussion or controversy. It is necessary then that prestige be the dominating quality in a leader of men. It is because of it that his suggestions take on an irresistible power, that he is able to throw his soldiers against the enemy in an enthusiastic assault, and that he can stop with a gesture the first fugitives, transforming them into heroes.

So, for that moral aberration of collectives, panic, two remedies of a moral nature present themselves. Prestige of the commander and joint responsibility of the troops.

Some have prestige inherently in their composition, others seem to have acquired it almost by accident, while a certain amount of it is acquired through exterior surroundings.

More difficult is it to inculcate in troops the sentiment of joint responsibility based upon mutual confidence. It can exist in a high degree only in soldiers who have gone to war together; for souls are revealed only in crises, and characters are verified only in suffering and dangers. If no one knows himself until he has suffered, still less does he know others until he has suffered with them. Napoleon said of the soldiers of Waterloo: "They had not eaten soup together long enough." The important thing is not to eat in the same room and at the same hours, but rather at the close of the same fatigues and in the midst of the same dangers. This is because the only means we have of developing joint responsibility among soldiers is to subject them to the same harsh proofs, which grow more and more painful and which are wisely graduated and energetically endured.

# Part III.

# PSYCHOLOGY OF INFANTRY COMBAT.\*

In dismounted fighting, especially, man is the first instrument of combat. Weapons change from time to time with the advances of science, but man with his weaknesses and his heroism is always the same, always subject to fear, to physical weakness and to waves of psychological enthusiasm or panic.

Many writers have noticed that skulkers are more to be expected in infantry than in the other arms,

The artillery is the supporting arm. Its men, in action, are in groups around the immobile pieces. To fight, the men must stay with the pieces. Being in groups around stationary objects the men are always under direct command and supervision. Skulkers are few in the artillery.

The smallest cavalry unit is a dual individual, the man and his horse. Of this pair the horse is a nervous and head-strong animal which by instinct seeks to go in herds—to stay with his comrades. It is much easier for a man to hide and stay behind than it is for a man and his horse to do so. The man who lacks the moral force to join in a charge also lacks the moral strength to hold his horse out of it. The rush and clatter of a charge also tends to raise the enthusiasm of the man. As one writer has said, "The cavalry charge is a bitter dose. First one makes a face and then swallows it at a gulp. But the infantry fight is a whole bottle of medicine to be taken drop by drop, and each drop is more bitter than the one before."

Even when fighting dismounted, the influence of the horse keeps men from skulking. The dismounted cavalryman never knows when his troop will mount and ride off somewhere else. He does not know where the lead horses are, but his officers do. If he does not want to be left in the hands of the enemy

<sup>\*</sup>Taken to great extent from "Psychologie du Combat de l'Infanterie," by Lt. Louque, itself mostly made up of quotations.

in case of a reverse or be left behind alone in case of success he must have some way of regaining his horse. It results that the cavalryman, almost instinctively, makes every effort to stay with his organization. On the other hand, the combination of men and horses, both being susceptible to panic, makes panic more to be dreaded in the mounted arms.

Numerically, the infantry comprises the bulk of a large force. For the above reasons, the discussion of the psychology of combat will be limited to that of the infantry combat. "In this arm there is no heavy and collected material to serve as in the artillery. Its strength is not due to position; armament is individual, cohesion can not be forced; it is an affair of the will of the individuals. In combat, the mounts do not instinctively group themselves as in cavalry, there is no headlong rush: but men weighed down under the weight of human feelings advance slowly and painfully by an intense effort of their wills." "The human element dominates all the rest. Its essential is solid character, unity of action and mutual confidence. man and the man alone makes the measure of these elements. All the power of the arm resides in the man himself. His solid personal character is his birthright; unity of action and mutual confidence come from the military education his nation has given him." (Loque.) If it has given him no such education, he will lack these qualities.

Our children don't get the love of country inculcated in them in the schools as we did ourselves. In the average family this is the case as well. We amuse the children by taking them to see the moving pictures, not by telling them stories of the deeds of our ancestors. We do not lay the foundation for strong patriotic character as did our fathers. Our population is becoming more and more mixed in character. No longer can we raise regiments where every man will be of the characteristic American stock, of the same general level of education and ability, of the same good average, honest, faithful personal character. No longer can we count on our average man making the best of what he can get in the way of rations; instead, we will try to furnish infinitely more and meet much more grumbling for our pains. We could not hold an army together a month on the food of the Civil War.

#### FEAR.

"Cowardice is fear yielded to; courage is fear vanquished." (Legouve.)

"Courage is neither so common nor so invariable as the public suppose. A person is very variable as to courage. He has his good and his bad days, depending on exterior circumstances such as physical or mental fatigue, cold, heat, hunger thirst, or the news received.

"As to the average, the ordinary man, it is necessary to flatter a little to appease public opinion. Without doubt he is capable of many fine moves, but subject also to strange reactions. It is said everyone is brave, but when one comes to the fact one finds few of uniform courage." (La Guerre et l'Homme.)

"Of all animals, man is the most cowardly. If one studies the faces before a battle he will realize this. For a man to sacrifice his life for the success of the end that the army pursues is a rare thing. Are there so few absolutely brave among so many brave men? Alas, yes! Gideon found 300 among 30,000 and he was surprisingly lucky." "The absolute bravery that does not refuse to fight even against odds, trusting in God or destiny, this bravery is not natural to man; it is the result of moral cultivation, and it is infinitely rare. For always in danger the animal sentiment of self-preservation bobs up. Man calculates his chances and makes how many errors?

"Man has a horror of death. Among corps d'elite a grand sense of duty, which they alone are able to understand and reach, sometimes makes them march forward; but the mass always recoils at the sight of destruction. Discipline has as its end to do violence to this horror by a greater horror—that of punishment or of shame. But there always arrives an instant when this natural horror takes the upper hand of discipline and the combatant flies. When the combatant is long under fire there is produced the selection of which Skobeleff speaks. The brave and the men of good intentions keep up; the others, the cowards, waiting under cover, weaken themselves and the others, delaying the execution of orders, breaking up the movement and impeding the effectives. Fire, even from a great distance, has then produced disunion material and moral." (DuPicq.)

"Fear is then an enemy that we have not taken into account, yet it is really more terrible than the real enemy, for it weakens the effective strength more than the latter."

These human sentiments are common to officers and men. The officer is sustained by two things which do not come to the aid of the soldier. He has better education and a feeling of the responsibility that rests on his example—noblesse oblige. He also has studied and thought about war. In his studies he has thought often of many of the situations of war. When these actually come to pass on the battlefield he will have a sense of having been in such a situation before.

This will help to make his acts and decisions seem natural to him. To relieve some of the nervous tension.

Fear—that is the thing to vanquish in order to assure the victory.

Battle is a terrible drama, a bloody tragedy, which unfolds itself to the hearts of all the soldiers, from the humblest to the most exalted. It is a struggle of two moral powers. The conquered are not those who fall dead or wounded, but those who followed and who rushed away because they were afraid. Fear is a very natural human sentiment. Those who are reputed to have been the most brave have aeknowledged it.

Ney said: "The one who says he never knew fear is a compound liar."

Grant said that he realized that the enemy was as afraid of him as he was of the enemy and that this thought helped sustain him through his battles.

Turenne said to himself before a fight: "You tremble, body. Well, you would tremble more if you knew where I am going to take you."

The manifestations of fear are not such as novel writers suppose, but they are ever present in combat.

The physical expressions of fear are betrayed first by an almost unconquerable desire to fire. Feeling in danger, man wants to strike back. Physiologically, fear dilates the pupils of the eye so that it can not be properly focused. Some can barely see the end of their rifle. Many fire from the hip. It is useless to try to take aim through the sights, the eye does not see them

and this is involuntary; it can not be overcome by an effort of the will.

Fear makes the muscles tremble so that, though the brave man grits his teeth and tries his hardest, yet his aim trembles and realizing this his morale is weakened. Also fear gives rise to respiratory disorders which greatly enhance fatigue and cause an involuntary contraction of the blood vessels which causes paleness.

"As a general rule our soldier in battle has an astoundingly simple and everyday demeanor. He who expects to see something out of the ordinary, something heroic on his face at these decisive moments, something picturesque and dramatic, is greatly mistaken. The soldier remains the same ordinary man as before, only his face is somewhat paler and its expression more concentrated and serious. His nervous and rapid firing betrays the inner struggle. It is at that moment that it is necessary to master the soldier's impression and bring him to a normal condition, as far as this may be done in battle." (Soloviev.)

Is it any wonder that battle practice is far inferior to target practice? Is it any wonder that foreign nations consider our refinements of target instruction as time wasted?

"For what is perfection one should recall the Spartan. It ever man had been perfected with a view to war, it was he, and nevertheless he was beaten and he ran. Then, unhappily for education, moral and physical force has its limitations, since the Spartans ran away—they who should have remained to the end on the field of battle." The prominence of the story of Thermopole shows how exceptional was the case when even a comparatively small force would fight on till the end.

Much was made in the papers of the self-sacrifice of the Japanese soldiers, yet we know that whole battalions of them were reduced to the grade of transport troops for cowardice—made equivalent to our O. M. employes for handling freight.

The fight is not over in an hour or two. It lasts for a week or ten days. The men suffer great physical hardship from exposure, lack of food and, most of all, from continuous nervous strain. They become so exhausted that they go to sleep on the firing line. There is a paralysis of wits—a total loss of initiative. In this state they are peculiarly accessible to the in-

fluence of suggestion—to panic. In this state a handful of cavalry suddenly appearing in their rear will break the resistance of a division. (There was an example of this very case in the Japanese War.)

Still, as in ancient times, "fear is the one true enemy and he is victor who is able longest to resist it." (DuPicq.)

### SKULKING.

Skulking is great and general in all armies. It is to replace skulkers and to replenish ammunition that we need such great depth in our formations. If it were not for skulkers we would have no place on the fighting line for the reserves, we know from experience, will be required.

Lt. Louque quotes the following examples of skulking:

"Hohenlohe tells of crossing the battlefield in war of 1870 and finding it covered with skulkers—whole battalions of them —some were lying down with their guns pointing forward like skirmishers—evidently they had remained there when their comrades advanced. Others were hiding in holes and ravines. All had an indifferent air. It seemed to be sufficient for them that the party of officers riding by did not belong to their corps. Some cried, 'Look, here are some more who are going forward to get killed.'"

Captain Culmann describes finding at Woerth five men in Indian file behind a small sapling who had remained there several hours.

Quotation from a French description of the defense of Saint Hubert, 18th of August, 1870: Four hours! Rain of bullets, all high. Ah, look! A line of battle coming to support us, well aligned. The marshal in the center, the colonel on the right, Sourdrille on the left. It is the Third Battalion. From my place I see holes made in the line, which soon reaches us and wishes to share our shelter, hardly sufficient for us. They get in two and three ranks; the occupants refuse to yield the place which they have had all day. They need not have sent all the soldiers in the world. We needed only cartridges.

What is that? We are turned. No; our friends 200 meters in our rear are firing on us, taking us for the enemy. We sound "cease firing," we make the signal, but the fire con-

tinues. My under lieutenant asks permission to go over there; he rushes forward through a storm of bullets, reaches their officers and finds among them some who ask if he really is a Frenchman. However, the fire ceased. That battalion rose up and rushed to join us. Where could we put them? Every one got behind something and began to shoot. We were in ten ranks. The front rank cried that the fire of those in the rear menaced them. I struck those nearest me with my cane and finally ended by turning my back to the fire of a Prussian battery which was less dangerous than my comrades.

A Prussian captain wrote in 1870:

I see many people occupied in trying to devise means to make the enemy's fire less effective, but I acknowledge with regret no one seems disquieted by the serious losses caused by men of the same troop firing on each other.

# BATTLE FIRE.

"Modern rifle fire produces a strong impression; the air seems to be literally filled with bullets; their plaintive whistling pervades the atmosphere like a continuous moan, above, below and everywhere.

"As soon as the first shot is heard the soldiers grow serious, take off their caps and cross themselves; all jokes and conversation ceases. At the given order all march gravely as during maneuvers.

"The courage and calmness with which the soldiers go into battle produce a strong impression.

"The infantry soon grows accustomed to rifle fire, but the artillery fire, especially the shells, produce a decided impression. It seems to me that this is not due so much to the losses inflicted by artillery as to the earsplitting noise produced by the explosion of the projectiles. The effect is produced only on the ear, but it is strong. The shimose shells have a specially powerful effect upon the inexperienced, and the shrapnel upon those unaccustomed to battle. The young soldiers throw themselves face downward at each bursting of a shell. Thus the infantry, which suffers most from rifle fire, pays least attention to it; the artillerymen, on the contrary, are much impressed by rifle fire. This may be explained by the fact that the men are accustomed to their own arm." (Soloviev.)

"At Liao Yang, Kuroki had before him 300 pieces of artillery that fired without ceasing for eleven days. The consumption of ammunition was enormous and has been placed at 500,000 projectiles, including the fragments, fired by one battery in a day. Result, 750 men were reached. That is to say, that each battery touched in some manner one man in a day. That is reassuring against danger, but not against fear. All those pieces did not kill as many as one would have believed; nevertheless, they attained their end—the demoralization of the enemy, for the enemy did not know in advance what the results would be." (De Mand'huy.)

"A Japanese general said to M. Kahn, war correspondent: See that battery firing in front of us? It aims at the Russian redoubts at 3,500 meters and it is composed of mountain guns. I am sure at this distance of not killing many Russians, but I have no doubt of the pleasure with which our infantry two kilometers in front of us take in hearing the shells go over their heads."

"The moral support of machine guns, especially if permanently attached to the regiment, will be greater still, for the rattle of their fire once heard is never forgotten."

"The employment of machine guns was for the first time quite great in the Russ-Jap War. Both sides have attributed to these machines a principal role both in attack and defense. In moments of crisis they invariably constitute a strong point of support. These guns are free from the effect of trembling nerves and muscles and for that reason are especially valuable in supreme moments."

Right here we get a good idea as to the proper use of machine guns. In supreme moments their effect is great, their moral support being as great as the physical. If they are pushed too far forward in the attack or held to the last minute in defense, and thus are captured, still the material loss is small. Used too liberally during the action such guns consume enormous quantities of ammunition—far too much—but used right their support, both moral and physical, will be invaluable.

So much for the effect the enemy's fire has. Now let us consider our own fire.

DuPicq: "The soldiers have emotions, fear even. The sentiment of duty, discipline, self-esteem, example of officers and above all coolness maintains them and keeps back the fear of becoming frightened. Their emotion does not permit them to see clearly, to more than partly adjust their sight, when they do not really fire in the air.

The rifle, like the cannon, keeps power, the faculty of adjusting sights, but the agitation of the heart and nervous system is opposed to the immobility of the arm in the hands; the arm being supported takes part always in the trembling of the man. The latter is in haste to launch the shot that will stop the ball destined for him before it can leave the enemy's gun. And for fear the enemy will fire first this vague sort of reasoning, though not actually formulated in the soldier's mind, still leads him to fire without even bringing the gun to his shoulder."

General Trochu says: "From my experience I am convinced that troops in the firing line, under the emotions of battle, never adjust sights, no matter how good the troops. They fire to the front, hurriedly, many of them hardly bringing the gun to the shoulder."

General De Negrier says: "Of 100 men who are under fire for the first time ninety-five do not even see the end of their gun and fire very high." He had considerable war experience.

Of the 100 men the five or six who remain cool see what they believe to be the point occupied by the enemy. Their bullets strike within a zone of 150 or 200 yards, provided the range is correct. The others fire at all kinds of angles. Their bullets go everywhere, but principally in a zone from 2,700 yards up

"The proportion of five men out of 100 who remain cool may seem extraordinary to those who have never engaged in a large battle, being themselves on the firing line. It is, nevertheless, not exaggerated and is sensibly the same in all armies." (De Negrier.)

After the above, one may doubt whether battle fire can be directed.

"A man under fire has the impression as quick as thought that he is specially and personally seen, that they are after him. It is the logical reaction of the sensation of danger on an organism deprived of the faculty of thought. The observation is, moreover, well enough known and proved by experience. Under the influence of this feeling man tries to kill, so he will not be killed, and it is one of the most powerful motives of the combatant. From this it results that he will necessarily fire, and, whatever happens, he will fire on the ones whom he believes are firing at him; that is, on those most clearly seen in front of him; this conviction that it is those seen and no others, which menace him, being the direct consequence of a series of unreasoning impulses, will present themselves to his mind as evidence. The man himself will not often choose his objective; the objective will be imposed upon him. One sees how unreasonable it will be to count on always being able to direct his fire on any point one chooses." (Grandmaison.)

"Let us not expect under a hot fire to be able to use fire with counted cartridges or volley fires. Only when the firer is himself not in danger will telescopic sights and all the other paraphernalia of the target range be of any value."

"Only against an inferior enemy (like savage tribes), where the soldier feels himself safe, will it be possible to use a knowledge of probably percentage of hits, split ranges or range finders."

"The efficienty of fire in time of war reposes above all else in the morale of the combatants." (Daudignac.)

"Absorbed as the commander will be in leading his men, he will have little chance to sanely appreciate all the conditions that are necessarily taken account of in range firing. He will have all his faculties engaged in solving the tactical problem and the problem of leading his men, without going into the direction or intensity of wind, the direction of light, the temperature, the barometer or even the use of the range finder. Instead, he will be seeing that his men keep some kind of formation, choosing the time for advancing, pushing the men forward, trying to keep control of the opening and cessation of fire, and above all in watching the enemy."

### WHY ASSAULTS SUCCEED.

In the attack "Each forward move requires great mental strain—takes perhaps hours to accomplish. Even the halts give no rest—no let up to the nervous tension. The men crouch in uncomfortable positions behind insufficient cover, with deadly projectiles constantly singing in their ears and a knowledge that each movement constitutes an additional danger of death. The human organism is not constituted to endure danger of this intensity and above all of this continuous duration. The fire of the defense does not destroy the assailant, but demoralizes him to such an extent as to suppress all effort." (Grandmaison.)

It is then only the arrival of fresh troops that can furnish the impulse for a forward movement. It is almost impossible to, in daylight, re-inforce a firing line close to the enemy which has not already gained superiority of fire; that is, has gained the ascendant morale and made the fear-stricken enemy

fire wildly while they themselves are less shaken.

This is the moral advantage of the attack. It feels itself superior and shows it by attacking. The waiting defender has lost morale by the very fact of taking the defensive. Now, as the advance proceeds, the defender fires, but the advance continues. Many writers have noticed that the attacker's loss grews less as he gets close to the defender.

"It has always been necessary to go in person, in flesh and blood, and to go after his hide and occupy the place of the other fellow before his opinion will change and he will acknowledge himself beaten. It is still the same today. Nothing is decided by fire alone."

"The bayonet alone marks a determination to go to the end. It proclaims the necessary understanding of the situation. It states the distance at which the enemy must be met in order to accomplish the task."

Let us now examine the state of mind, the morale of the defenders of a position.

"In place for hours, for several days, perhaps, their passive attitude has only convinced them of their inferiority. They have suffered all the emotions of the preparatory combat; volleys of infantry; machine guns fire shrapnel; nothing has been

spared them. Their losses are not much, perhaps, but their morale is considerably lowered.

"The short bursts of regulated fire, even if inefficient, against a masked object, are absolutely depressing.

"DeWet, in his Memoirs, tells us that on two different occasions his burghers ran away under the fire of artillery without having lost a single man. A combat is entirely an affair of morale.

"The wounded must most often remain a long time where they fall, it being impossible to remove them under fire, and their presence only increases the skulkers."

Further, the man realizes perfectly that the nervous trembling which he is unable to overcome is disarranging his aim and that his bullets can not hit the adversary, who, step by step, is approaching him, bayonet already fixed, in order to make him feel what is coming to him if he waits. And that is precisely the reason why attacks succeed.

(See "Tactics," Balck, page 87.)

At Nicholson's Neck in 1900 the Boers crawled forward, firing. The defenders fired also, but, while a storm of bullets swept over them, they could see the Boers getting nearer and ever nearer. The psychological effect of this uncanny crawling advance was so great that by the time the Boers were within 300 yards the British soldiers were individually showing white handkerchiefs. The Boers feared a trap and continued the attack. Soon the white handkerchiefs were almost universal. When the Boers came up to them many of the British soldiers were weeping and their officers laid the trouble to the constant advance of the crawling line against which the British fire seconed to have no effect.

At Chattanooga the Confederate soldiers left what their officers thought to be an impregnable position because of the moral effect of *seeing* Thomas' masses advancing toward them. (See Alexander.)

"Then, should a charge alone, unprepared by fire, succeed? Alas! No. In spite of all the chances of success which we have just enumerated, man is slow to comprehend that he can conquer by running straight into bullets. Thus it is that at the moment of the decisive attack the struggle between the instinct

of the men and will of the chief becomes more intense."

The decisive attack must be preceded by efficient fire preparation

#### CONCLUSIONS.

As men begin to suffer losses they will open fire even in spite of orders, hence it is better to open fire by command and "open the safety valve of the emotions" before the men get out of hand. Get them as far forward as possible without serious losses, but under serious losses open fire, unless the distance is short enough to be covered in a single rush.

"Before an action it is of use to say to the men a few words, that, if they do not inflame the imagination of the men, will at least show them that their leader is there and that he is confident."

At Pickett's advance, last day at Gettysburg, General Gibbon rode down the lines, cool and calm, and in an unimpassioned voice he said to his men: "Do not hurry, men, and fire too fast; let them come up close before you fire, and then aim low and steadily." "The coolness of their general was reflected in the faces of his men."

The nature of these remarks, even the utility of making them at all, depends on the character, or better the race, of the soldier. For a Frenchman such attempts to inflame the imagination and excite enthusiasm might be continued at every halt during the deployment and even after the first shells began to arrive and be crowned by a supreme effort just as the serious action began. This was the idea of Napoleon, who used to ride along his lines at the beginning of an action to increase the enthusiasm of his men. With us a cool, cheerful, confident bearing of the officer, even a joke cracked at another officer, would better answer the purpose than a fiery speech. The main point is to keep the command from sinking into the silent, self-centered dejection that comes from letting each man have time to brood over his personal danger. "In making any effort in this direction it may be well to remember that it is always easier to secure the attention of a crowd than of isolated individuals."

If you know a certain danger threatens, it is better to warn your men to expect it, for an expected danger is better withstood than one that comes as a surprise. The French regulations of 1809, made up by Napoleon, laid it down as a principle that the men should always be forewarned of the danger to which they were about to be exposed; that if an extraordinary effort was to be demanded of them they should be so told, but that in any case, though warned of the danger, it should not be exaggerated to them.

During the long days of battle the men will be subjected to all kinds of discomforts, including difficulty as to subsistence. Often the wounded can not be removed from the firing line till night. Their cries still further add to the depression.

When high explosive shells burst the effect is small, almost nothing against living targets; the pieces are too small, being almost dust. On the other hand, "It does but little damage, but the noise is fearful and its explosion throws up a great column of black smoke, mud, pebbles and fire which produces a great impression upon inexperienced soldiers. The moral effect is absolute." (Soloviev.)

The results of fire will vary from nothing to a maximum. When the enemy is cool and has a good target losses will be great and very sudden. "At Magersfontein a British regiment returned the Boer fire for three minutes and then broke. It lost 10% of its effective strength. It may be said that 10% is not an excessive loss, but 10% loss in three minutes is sufficient to make any regiment break, for such quick and severe loss will at once give the enemy the ascendant morale." This is the argument for the use of machine guns. If they can be used effectively the losses they will inflict will be so sudden and so great as to break the morale of any troops exposed to their fire.

Efficient battle reconnaissance must thus be made to prevent these sudden losses and the men must be in the fire zone for considerable periods only when they are protected by natural or atificial cover or by the effect of their own fire making the enemy shoot wildly.

"Each eye-witness of battle may confirm how narrowly the men watch their officer. The soldiers judge by their officer the condition of affairs, the greater or less danger, the success or failure. \* \* \* Woe to the unit which in time of peace did not become impregnated with the spirit of iron discipline. It will pay dearly for it in war."

To quiet the men "It is useful to make remarks concerning the service alone. For example: 'Why are the sights not set in that squad? Squad commander, what are you thinking about? Examine and correct immediately.' If the commander is angry, reproves neglect; this means that there is nothing unusual—that everything is going as it ought and that there is no cause for fear. The men grow calmer and forget that bullets are whistling about them." \* \* \* (Soloviev.)

A threat or a joke may bring the men to their senses. "But a threat must be serious and the men feel that it will be executed if need be. Angry words and shouts can do nothing." (Soloviev.)

"It must not be overlooked that the soldier, separated by a considerable interval from his comrades in (a thin skirmish) line during the advance and withdrawn from the influence of his officers succumbs more easily to temporary spells of weakness and is more apt to remain behind than the skirmishers in a dense firing line." (Balck.)

The example of his officers and his own sterling character are the main factors which, aided by discipline, will enable the soldier of today to develop that morale which is the main element in winning victories.

# THE WORK OF THE CAVALRY EQUIPMENT BOARD.

#### PROGRESS.

THE Board, after a period of ten months, is now said to have completed its tentative revision of the cavalry equipment. Before its duty can be finally completed, these present results must be submitted to a test that shall definitely determine their individual merit or demerit. Application has been made for the equipment of a squadron with the new models and for permission to make such a test. The following notes will give some idea regarding the scope of the revision and the results attained.

#### THE NOSE BAG AND GRAIN ROLL.

The present nose bag seems to have occasioned about as much criticism and complaint as any detail of the equipment. The one now recommended obviates most, if not all this trouble. It is merely a canvas bag, about two feet long by one foot in width, with a supporting strap and attachment, therefor, at each end. One end is prepared for the entrance of the horse's nose. The bag is placed under the jaw and neck, one supporting strap passing over the horse's neck, well down, the other over his poll. The horse puts his nose into the hole and feeds in perfect comfort. His nostrils are not entirely covered at any time. He seems to have no desire to throw the bag—never attempts it, and couldn't succeed if he tried. At its first appearance everyone laughs at this bag and seem to regard it as a freak-everyone but the horse-he knows just what to do with it. It is believed that were this bag placed on a horse that had never before seen a nose bag of any kind it would go at once to eating from it as though it had been used to doing so all its life. The weight of this bag is about the same as that of the old one. It is a proprietary article, and collects a royalty of 5 cents, or such a matter, on its man-

ufacture. A grain bag of sheeting,  $30x7\frac{1}{2}$  inches, accompanies this nose bag for the purpose of carrying grain. bag readily carries up to eight or nine pounds of oats, and when placed within the nose bag forms a grain roll that attaches very conveniently to the saddle pommel. The importance of this feature can scarcely be overestimated. Cavalry horses of the United States Army have usually been starved and have broken down from this cause in much greater proportion than from hard work. In a state of nature the horse feeds about twenty out of each twenty-four hours. Digestion goes on simultaneously with consumption and his stomach is even then soon empty. In a state of domestication he is fed a much more highly concentrated food-grain-and the feeding is not required so frequently. After about four hours, however, even with feeding oats, his stomach is again empty. If his work is hard, it should be replenished at once. If the work is mild, an interval of an hour or two could elapse with safety before his reserves are drawn upon. This is the effect that should be guarded against—using up the horse's reserves. Feeding once in six hours thus becomes a necessity. This has long been appreciated by civilians. It is appreciated in foreign armies. Carter in his work recognizes it, but says it is impracticable in the United States army. The Board has now made it practicable. Three or four pounds of oats can readily be carried in the grain roll on the pommel. When the column halts daily, about 11:30, to eat lunch, unstrap the grain roll and hang it on the horse. The horse thus eats his lunch at the same time, his stomach is replenished, digestion recommences, his reserves are not drawn upon, he comes into camp at the end of his march in good strength and spirits, can then readily accommodate any reasonable delay on the part of the Quartermaster's Department in procuring forage, and is ready to do his thirty or forty miles the next day, if necessary, without noticeable injury. In addition, this nose bag serves as a convenient water bucket whenever it becomes necessary to water in this manner-a material advantage. This bag when in use is always supported on the horse's neck, can not get on the ground, nor be attacked with his hoofs, as is frequently the case with the present model Its life should be longer on this account.

#### THE CORONA.

The saddle blanket has also come in for its share of criticism. It is difficult to keep the wrinkles out of it. It is hot and causes profuse sweating. The salt from this sweat forms in the fiber, resists efforts to remove it, and diminishes the elasticity of the blanket. It is expensive, and with those troop commanders who do not give great attention to its being thoroughly cleaned, turned and refolded frequently it does not last long. It is not shaped to the horse, and consequently portions of it work up into the slot in the saddle and cause discomfort to the rider. The board has substituted a shaped corona therefor. This is composed of three layers of blanket and one, next to the back, of cotton sheeting. The layers of blanket are well guilted together. There can be neither wrinkling under the saddle nor working up into the slot. The cotton surface next to the horse can be readily scrubbed and dried after each day's march, if necessary. It can thus always be kept free from salt, hair, blood and foreign substances, and the elasticity of the fibre preserved. The outer surfaces can readily be replaced at the Arsenal, and the body of the corona made to last indefinitely. The insignia is placed on the corona itself. This obviates the use of the saddle cloth. It is lighter in weight, less expensive, lasts longer, looks better, is more readily put on and kept clean. It does not, however, serve as a blanket for either horse or man. The idea was taken from the packers, who always use a corona under the blanket for many of the purposes above mentioned.

#### THE HALTER-BRIDLE.

The Board has substituted a combined halter-bridle for the two articles at present used. By this means the weight and also the number of straps on the horse's head when both bridle and halter are worn are materially reduced. The model adopted combines as much neatness as is consistent with the necessary strength and is thus a gain in appearance. As one article serves the purpose of two, there is a gain in economy. The model adopted permits either one of the bits, or both together, to be readily applied and used; there is thus a gain

in convenience. As the halter tie will be always present there will be no occasion for hitching the horse by the bridle reins. These have consequently been made shorter and much neater and lighter. This has been found to be a great gain by all who have tried them. As the use of the pommel pockets prevents the convenient tying of the halter strap to the pommel, as at present, it is now tied about the horse's neck, well down towards the withers, after the manner of the British. This requires the length of about 100 inches. It is impracticable to cut that length from leather without splicing. The Board has accordingly adopted, as a tie, a 1/2-inch Manila rope, dved to an olive drab tint and treated in paraffin to render pliable and waterproof. This is attached to the halter by a swivel bolt snap, brozed finish. The plan is that this halter-bridle shall be issued to the man individually, and in garrison will be kept, when not in use, with his other equipments in the saddle room. He can thus be held responsible for its presentable condition at all times—a material improvement over the present method, where the halters are used in common, and no individual can be properly expected to keep them in condition. To provide for the security of the horses in garrison a simple web halter is adopted. These will be issued to the stable sergeant for the entire mount, will be used for tying the horses in and about the stables, and for no other purpose. In the field and on the march the halter-bridle will be used.

The Ordnance model of 1909, bit and bridoon, with a few minor modifications, has been adopted by the Board.

# THE SADDLE.

It is probable that this single item occupied as much of the time and attention of the Board as all other details combined. To devise a satisfactory saddle is an undertaking of considerable proportions. Whoever has succeeded in producing a superior saddle of new design may be safely credited either with genius in this particular direction or else in having devoted a great degree of attention to the matter. The Board lays no claim to the possession of genius, the alternative is unavoidable. After a careful consideration of the entire subject, it was decided that, owing to the many serious and inherent de-



Contrasting the present equipment and pack (off side), with the proposed equipment and pack as tentatively decided upon. PLATE I .- ORDINARY FULL BACK.

fects of the McClellan saddle, all attempts to modify or improve it with a view to making it satisfactory would prove futile. It was thereupon determined to devise a new type of saddle, retaining, as far as practicable, the acknowledged ad-

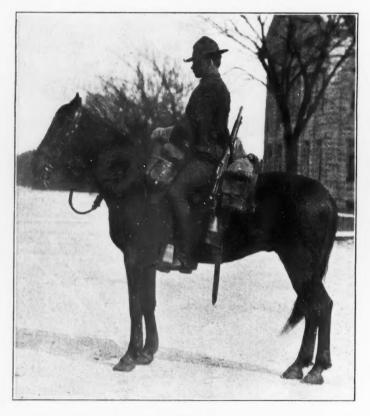


PLATE II .- FULL WAR PACK.

Proposed equipment and pack. The pack as here shown conforms to the Field Service Regulations as to rations, (Par. 207, Section 3), ammunition, (Par. 224, line 12), and grain, (Par. 204, line 27).

vantages of the McClellen type, to-wit: Its simplicity and its permitting the rider to get "close to his work." From the many reports received from various sources it was apparent to the Board that, in the development of the saddle, the preser-

vation of the horse's back was of the first importance. The comfort of the rider was secondary. To accomplish the first consideration a side bar must be devised that would actually fit the horse's back. That is to say, would constantly present a smooth bearing surface, in shape the counterpart of that portion of the horse's back supporting it, and in dimension, limited only by that of such corresponding portion selected to support the weight, at the same time being entirely

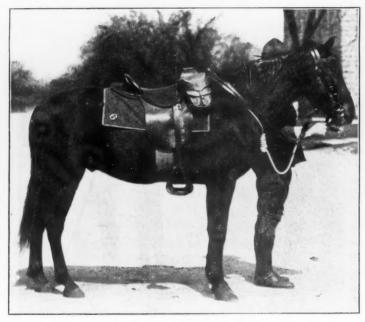


PLATE III.-STRIPPED SADDLE.

The proposed adjustable saddle is here shown with skirts attached. These skirts are removable. Pommel pockets attached to show size, etc.

free from all bearing upon edges or undue convexities of whatever kind. It must be competent to do this, not only for a given horse, but for all horses with approximately normal backs, and not only for these horses in a given condition, but for all possible conditions of flesh. Such a side bar having been obtained, the assembled saddle must readily take the position desired upon the horse's back and tend to remain in that

position, without requiring to be held there by a system of attachments that materially interfere with the horse's action or comfort as do quarter straps, breast straps, cruppers and the like. It must do all this automatically, or at least readily, and without requiring scientific adjustment. To obtain the first requisite, the shape of the side bar, attempts were made to build up artificial backs that would each represent a mean of many horses. Measurements were taken at different posts for

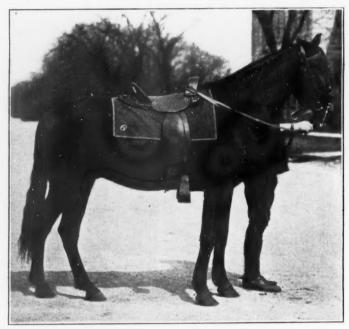


PLATE IV.—STRIPPED SADDLE.

The propose adjustable saddle is here shown with sweat leather attached.

this purpose, with a complicated, specially designed instrument. The result of this effort was not encouraging. It becomes practically impossible to accurately represent a horse's back by contours and sections taken by mechanical devices. So much time is exhausted in transferring the contouring instrument to and fro from the horse to the paper that he invariably changes his position more or less during this period, and with such changes of position come corresponding changes of form, so

that it is next to impossible to obtain results of any value by this method. After a reasonable attempt this plan was abandoned. The next attempt was to take by impression a mold or form of a fairly representative saddle horse's back by means of plaster of paris. A frame of boards, about a foot in height and about two feet square, shaped to the horse on its lower side, was placed on the horse's back after the latter had been well coated with cosmoline to prevent the action of the plaster on the hair. The joints between the lower edges all around and the horse's back were snugly calked with oakum and clay. Six or eight buckets of prepared plaster of paris were then quickly poured into the frame, the horse being coaxed to remain in a normal position meanwhile. This material sets almost as soon as in place. The horse made no fuss, and in two or three minutes there was removed from the back as fine a mold as could be desired. From this mold on the following day a perfect cast representing the horse's back was made, and from then on the Board had something upon which to work. From this cast there was made another mold, in order not to use up the original one. This was trimmed down to the approximate size and shape of a saddle, a slot cut out for the backbone, strengthened with arches, and there was thus obtained the representation of a bearing surface that actually fitted the back in question; in other words, the forms of the side bar. The first of the above requirements had thus been fulfilled. There was next made a representation in timber of this plaster bearing surface. This was applied to as many different backs as circumstances would permit, being corrected when necessary by the removal of such small portions as might press unduly in the general case. By this means a side bar was obtained that would fit the average horse in his normal condition. It still remained to fit the under and over averages, and the reduced and overfed conditions. Plainly this could be done only by hinges. The saddle was then assembled by means of four hinges, one under each extremity of both pommel and cantle, resting upon the median elements of the two side bars. Upon these hinges the side bars move freely when the saddle is not on the horse. The act of securing the saddle to the horse, that is, of drawing the cincha, automatically adjusts it

to the horse and prevents further motion in any considerable degree, vet leaves sufficient to readily accommodate the slight movements of the horse's backbone and avoids in this manner the straight jacket effect of the rigid saddle. The second requisite was thus accomplished. The third requisite was obtained by attaching the cincha to the central portion of the cutside edge of the side bars, and the use of a 36-inch cincha of thirty strands of small braided linen fish cord. To furnish friction on the corona and give further elasticity, removable felt pads, one inch in thickness, were placed on the lower faces of the side bar, and, as far as the horse was concerned, all the requirements had then been complied with. To adapt the saddle to the rider was not so difficult. The seat was made horizontal so the rider would sit in the middle of it, and the desired slope of both pommel and cantle was readily obtained. An adaptable sole leather seat covers that portion of the seat of the saddle that comes in contact with the rider's seat. Fenders (sweat leathers) or skirts (choice not vet determined on, but will be decided by the coming test) protect the rider's leg from the horse's side. Three-inch stirrups with re-inforced treads, without hoods, attached to safety loops, support his feet. A broad smooth pommel permits a rest to his hand when desired and avoids sharp edges striking his hand at other times. This pommel is of pressed steel and while giving more space to the withers is of less height than that of the present issue. The side bars have been slightly lengthened in rear of the cantle to support the roll, but are turned up to avoid pressure on that portion of the back not adapted to it. All the advantages of the McClellan saddle have thus been retained. All its defects avoided. This saddle has already been subjected to considerable use and has given satisfaction wherever tried. The Board believes it will be generally acceptable.

#### THE RIFLE CARRIER.

Many correspondents have urged that the Board provide a better method for carrying the rifle mounted, but no one suggested the method. About the time it was intended to seriously consider this item Colonel Patterson, of the British

Yeomanry, a well-known hunter and explorer and author of international repute, as well as a most agreeable gentleman, obtained permission to come from London and appear before the Board for the purpose of introducing a rifle carrier of his own invention. His device consisted essentially of a steel clutch attached to the near side of the saddle, and resting about eight inches below the cantle. This clutch grasped the rifle at the small of the stock. The barrel extended upward in a nearly vertical direction, passed through a 3-inch ring that stood out from the rear portion of the cartridge belt, and was loosely supported in that position by this ring. A strap terminating in a convenient snap hook depended from the shank of this ring and engaged in the trigger guard. To use this device: After saddling the trooper would pass the muzzle of his rifle up through the ring on his belt and attach the snap hook depending therefrom to the trigger guard. His rifle then swung from his belt with the butt plate about two or three inches above the ground. Both his hands were free to use for other purposes. He mounted at the command precisely as though he had no rifle. When fairly in the saddle, with his left hand he grasped the rifle near the rear sight, and, aided by his left foot, readily forced the small of the stock into the clutch. He then dismissed the matter from his mind, and, while riding, forgot that he had a rifle. On the command to dismount he dismounted and stood to horse without any reference to his rifle. In case the horse fell or the rider was thrown the rifle readily detached itself automatically from its clutch and came away with the trooper. It was always with him-he couldn't separate from it. This device has much to recommend it, and the Board gave it most exhaustive consideration. The enlisted men were generally pleased with it. One experiencd and skillful enlisted man of the Sixth Cavalry said after using it that for the first time he felt as though he was riding a horse; on all previous occasions he had felt as though he was riding a set of equipments. In the end, however, the Board was reluctantly compelled to abandon its use, mainly on account of the difficulty experienced in obtaining steel clutches that would render satisfactory service. After a few weeks' use a considerable portion of them either lost their elasticity and

1064

shape, or cracked and gave way. In its later attempts to devise a carrier, the Board retained as many of the excellent features of the Patterson as possible, and contented itself with merely attempting to remedy the defects of the latter. As finally adopted, the rifle carrier resembles a leg of mutton affair of harness leather, about 18 inches in length, the smaller end terminating in an eye, that is attached by means of a strap and buckle to a 11/4-inch steel loop on the lower edge of the near side bar of the saddle, just below the cantle. The lower portion of the carrier terminates in a boot or bucket, shaped to fit the butt of the rifle, and of a depth of about 3 inches. At the proper height above the bucket, a steel spring clutch is riveted to the carrier. This grasps the small of the stock, it supports no weight, but merely prevents the butt from jumping out of the bucket at fast gaits. A very simple spring serves this purpose, and the strain upon it is slight. On the back side (toward the horse) of the carrier, and at the point of attachment of the steel clutch, a strong dependent billet is attached. This engages into a special cincha of linen webbing passing under the horse, and attached to the side bar on the off side, just opposite the corresponding attachment on the near side. This keeps the carrier and rifle snugly against the side of the horse and prevents all lateral swinging and flapping. The bucket contains a floor spring, which dissipates the rifle's downward concussion, thus avoiding its transmission, with resulting blisters to that portion of the horse's back supporting this weight. As far as experiments have gone, this carrier appears to have preserved the advantages of the Patterson and avoided its defects. Further and more severe tests will determine its real usefulness. All who have used it thus far like it. No one would willingly go back to the present method. The most careful observation on many marches has failed to detect a single instance of injury to the horse's back from the use of either the Patterson or the Board's carrier. There is no tendency to injure the sights of the rifle as in the present boot. The rifle carries well behind the leg and is out of the way. It does not interfere with the use of the aids Both the weight and the cost of the carrier are less than that of the present boot.

#### THE POMMEL POCKETS AND RATION BAGS.

Carrying the rifle at the rear of saddle compels a redistribution of the equipment to avoid encumbering the cantle. This has been accomplished by substituting pommel pockets and ration bags for the present saddle bags. The pommel pockets are made of the same material as the present saddle bags, are of a sufficient size to hold the required contents and nothing more. They attach readily to the pommel by means of foot staples, are carried low, to the front, and well out of the way of the rider's knees, are small, neat and shapely in appearance. Some have suggested they even be worn at dress formations. The near one holds the canteen and cup. These articles were originated by the Infantry Board, and adopted virtually without modifications by the Cavalry Board, in order to avoid increasing unnecessarily the number of patterns in the Ordnance Department. The canteen is bottle-shaped, of aluminum, and holds one quart. The cup rests on the base of the canteen, is also of aluminum, and is slightly smaller than the present issue. It has an ingeniously devised folding handle, which serves to support it when placed on the ground. A blanket-lined canvas cover, readily removable, encases both canteen and cup, and carries at the back a snap hook for attachment to the belt for dismounted service. These fit snugly in the near pommel pocket, and are strapped securely in place. No more knocking about and rattling by these articles. The off pocket contains a canvas bag, which holds the meat can, knife, fork and spoon, and protects them from dust and dirt by a flap which closes over the top and extends well down the side. This bag may be readily detached and removed for cleaning. The horse brush, curry-comb and grooming-cloth fit in between this bag and the outside of the pocket. The horse brush has been reduced in size about one-half; otherwise is like the present issue. This reduction appears to be an allround advantage. The small brush works more readily into the difficult places about the horse, between his legs, under fetlocks, etc., weighs less, costs less, takes up less space in the pocket, and probably will last longer. The curry-comb has been reduced one-fourth in size, has attached a hoof-hook, similar in design to that furnished by Sergeant Westbrook, Troop "G," 15th Cavalry, but is otherwise similar to

the present model. Below the grooming outfit there is a space for the trooper's personal needs, his pipe and tobacco, bottle of oil, etc. This is entered through an opening on the face of the pocket just below the grooming outfit. The Field Service Regulations require three rations carried by the troopers under certain exigencies. These rations form so heavy and bulky a mass that it was considered impracticable to fabricate pommel pockets large enough to hold them in addition to the articles mentioned above. Special ration bags have been devised for carrying these rations when necessary. These ration bags are of canvas, when carried are attached to the cantle, well down, the lower extermities being secured to the rear cincha buckles to avoid lateral motion. They admit of readily being formed into a kind of knapsack, with a pocket for carrying the mess outfit. When the trooper has to separate from his horse, he can thus shoulder his ration bags and be independent of his mount in this respect. These carry very conveniently upon the back and the dismounted trooper is but little encumbered by his rations. When empty, they occupy but little space and go readily inside the shelter tent roll.

#### THE SABER.

While Europeans generally favor the thrust in a saber attack, and doubtless their position is the correct one-at least in theory, however it may work out in practice—Americans, on the other hand, seem to like to cut and hack. This appears to be a national trait. It may be it comes from the fact that it is but a comparatively short time since everyone in this country was skillful with the axe through force of circumstances, possibly it comes from baseball. At all events the spirit exists and must be recognized. This the Board has done by producing a saber well adapted to both cutting and thrusting. Its balance is a happy compromise between these two extremes. Its point is on the median element of the blade and accurately hits the object aimed at. The blade for some distance back from the point is double edged, and its shape favors penetration. Although issued dull, its edge is capable of being rapidly brought to a slicing keenness. The guard is of bronzed steel. It completely protects the hand from points, and in a considerable measure from cuts. It

is serviceable in every respect, and attractive in appearance. The scabbard is of wood, covered with rawhide, and finished without by olive drab canvas with bronze metal mouth and tip. The mouth is bell-shaped, or, to be more accurate, funnel-shaped, to favor the ready return of the saber. The tip terminates in a dowel to fit the grommet of the shelter tent, and the saber will replace the present shelter pole. All who have seen this saber have expressed their appreciation of it. The knot is simpler. more convenient, more attractive in appearance, and more serviceable than the present issue, though similar in principle. This saber is purely a service weapon. Not one detail has been sacrificed to considerations of mere dress or garrison use. It is the intention of the Board to leave the present officers' saber for garrison and similar service, and use this new model by officers solely in campaign—it being furnished on such occasions from troop storerooms, as revolvers and ammunition are at present furnished to officers. For enlisted men, this saber is carried on the off side of the horse, just opposite the rifle, in a loop attached to the leather support acting as the off billet for the rear cincha. This loop is swivel-attached and has motion forward and backward in a vertical plane. The cincha prevents all lateral swinging and flapping. In this position, it is readily drawn and returned, is well out of the way, permits the use of the aids, and contributes its weight as a counterpoise to that of the rifle. For officers an attachment somewhat similar but especially adapted to their use is provided.

## THE INTRENCHING TOOL.

The American Cavalryman has always been a Dragoon. In many instances his dismounted service has been of great value. Lack of space prevents supporting this statement with numerous historical citations, but Buford's seizing and holding in advance the position at Gettysburg is a fair illustration. European authorities were slow in learning the value of cavalry's dismounted action, but they seem to have at last appreciated it, and measures are now on foot to furnish both the bayonet and intrenching tool in some European cavalry services. There can be no doubt but that in the future, far more than in the past, cavalry will make use of dismounted action, and must be armed and

equipped to do so to advantage. The U. S. cavalryman now has a rifle equal in power to any in the world; were he also supplied with a bayonet and an intrenching tool, he need have no fear of infantry under any circumstances. The Board has not seen its way clear to provide the bayonet but it has furnished the intrenching tool. It is as good a one as the infantry has. The handle is formed of the picket pin. The blade alone adds weight to the equipment, and this is but about one pound. With this tool the dismounted cavalryman can protect himself at least from the bullets of the infantry without having to retire before them. He now has only their bayonet to fear. This shovel is carried in a leather case, underneath the saber (between it and the horse). This case is readily removable when not desired. When advancing dismounted the shovel is held in a small loop on the belt.

#### THE LARIAT AND PICKET PIN.

Some correspondents, not many it is true, have recommended that the general use of the lariat and pin be discontinued, only a few being retained as a temporary picket line. The discussion set forth in support of this position reduces to two principal and one or two minor arguments. The principal ones being, first, that it is no longer necessary to picket horses; second, that it is impossible to use the lariat for picketing without rope burning and disabling horses in appreciable numbers. The minor arguments are, first, the added weight of the lariat and pin, and, second, the danger of injury from the pin, in case of a stampede, or even when attached to the saddle on the march. To consider these arguments in turn: First, it is believed that the convenience and abundance of supplies of all kinds at maneuver camps, on regular practice marches and all similar occasions, together with the scarcity of actual field service, has caused officers to overlook the imperative necessities of real service, where horses must eat even though there be no ready contractor with his supplies. The importance of feeding frequently was referred to supra under the subject of the grain roll. It will not be again considered here except to say that it is necessary. If the horse's reserves are to be held for emergencies, he must undergo no long fasts, but must eat at every possible opportunity. The lariat not

only readily accommodates this exigency but is virtually the only means of accommodating it, so that whatever may be urged against it, its use in actual service become imperative. The rope burns are little but a myth—a hobgoblin manufactured by veterinarians. A horse can readily be taught to graze quietly on his rope wholly without injury from rope burns. No military horse's education is properly complete until he will do this. This argument against the lariat is not worth one moment's consideration. The minor arguments have been met, as far as practicable, in the Board's revision of the equipment.

To show that these are no idle words, attention is invited to the fact that several European cavalry services, as well as the Japanese, provide lariats, so that every possible opportunity may be utilized to keep their horses' bellies full. In '88 the 7th and 8th Cavalry changed station by marching. The march was a long one, approximating 2,000 miles for some stations. The 7th Cavalry used lariats and grazed constantly, except when on the road. Although grass was usually abundant, the 8th Cavalry used no lariats, but relied on the Q. M. Department for its supplies. The regiments met at Fort Riley, and furnished an object lesson regarding the use of the lariat that was of lasting effect in the minds of some present. General Chaffee, one of the most able and experienced Field soldiers of the U. S. Army alive at the present day, believes in its retention.

The lariat is similar to the present issue except that its length has been reduced from 25 feet to 15 feet. One end terminates in a snap hook without connecting link, the other in an inch and a half ring. On the march the lariat is rolled and secured by thongs to the upper surface of the shelter tent roll. The picket pin is hollow, oval in cross section, and of a pattern adapted to form a convenient handle to the intrenching tool. Its upper end terminates in a small hammer head, so that in emergencies the picket pin may be readily used for shoeing a horse. It has already served that purpose. It is carried on the march in a small leather scabbard secured by two straps to the outside of the saber scabbard. It is well out of the way there and contributes its weight towards counterpoising that of the rifle. It weighs a little less than the present pin. To use the lariat and pin, snap the hook into the halter ring and drive the pin through

the ring at the other end. The ring will turn on the pin and serve as a swivel. In case the horse pulls it up, the end of the lariat will draw off and leave the pin lying near where it was driven. This may occasionally lose a pin, but it will obviate all danger of injury by flying pins in case of a stampede.

### THE HORSE SHOE AND NAILS.

The object of the shoe is primarily to preserve the hoof from undue wear, and, incidentally, to assist the horse in exerting his strength on icy going. In the use of a shoe, two undesirable features are of necessity introduced. First, by adding weight where it is most objectionable, both mechanically and physically, and, second, by raising the hoof above the ground so as to diminish frog pressure and thus tend to destroy the elasticity of the foot. While both of these features are unavoidable, they are evils that must be kept within narrow limits. To this end, first, the shoe should be made a light as possible and still serve the purpose; second, calkins should be made use of on the saddle horse only when necessary to avoid his slipping. To bring about the first requisite, the shoe should be made of steel, should be narrow in the web, of a thickness sufficient to wear no more than six weeks, should beyel from the inside outward towards the ground surface to imitate the natural hoof, save weight, and prevent mud, pebbles and other foreign substances from lodging in the shoe, and should be countersunk rather than creased for nail holes, as this gives strength and permits a corresponding saving in weight. To accomplish the second requisite, both a summer and a winter shoe should be adopted. The summer shoe should have all the essentials above set forth, and, in addition thereto, the hoof bearing surface should be level to prevent an undue portion of the weight being borne by the hoof walls. The winter shoe, having to support calkins, cannot possess all these essentials in so marked a degree as the former, but should approximate thereto as nearly as circumstances will permit, should be drilled and tapped for removable calkins, should be fitted with both short, blunt plugs to maintain the holes perfect when the going is not icy, and with higher sharp calkins for use in icy times. Each trooper should be competent to readily interchange them when necessary, and should be provided

with the proper tools for so doing. The Board has made investigation looking toward obtaining such shoes. Both the Phoenix and the Bryden companies supply a shoe that conforms to the essential requisites of the summer shoe. These are in sizes 1, 2, 3 and 4, their respective weights being 10, 12, 15 and 18 ounces before fitting; upon fitting the weight decreases a little. The Neverslip company can supply the winter shoe. It has the essentials set forth above; it comes in five sizes, covering the range of the cavalry horse's hoofs, and its weight is between the limits of 91/2 and 19 ounces for these sizes. Horse shoe nails should be as small as will well serve the purpose and should be bright. The usual commercial nail is a good one, but on being carried on the march will get rusty and be hard to drive on this account. The Board has taken steps to prevent this by having the nails carried by the trooper coated with an anti-rusting substance, tin, zinc, aluminum, or a mixture of these substances. This coating does not interfere with the use of the nails and preserves the bright finish. The Board will recomment that but one shoe and ten nails per horse be carried. These will be carried in a shovel carrier. A partition therein separates the shovel from the shoe, and a small pocket within carries the nails. The weight of these articles tends to counterpoise that of the rifle.

# WIRE CUTTERS, WRENCHES AND HATCHETS.

Each trooper is provided with a small but powerful pair of wire cutters, so that, in the event of his being ordered in actual service, on any distant mission, he will possess the means of obeying such order, without being subject to annoying delays en route. Both the weight and the cost of these cutters is slight. They slip readily into the pommel pockets. Each man is also provided with a light wrench for changing the calkins on his winter shoes. This wrench also goes into the pommel pocket by the side of the nippers. Eight light hatchet heads adopted for use with the picket pin, as handle, have been provided. They are excellent tools. They will be supplied to men not issued shovels, and the hatchet head will occupy the space in the shovel carrier that was prepared for the shovel.

# THE PACK IN GENERAL.

Assuming the weight of the trooper, naked, at 150 pounds, his horse carries under the present system, when fully armed and equipped, under favorable conditions, 286 pounds, 2 ounces. In spite of all its efforts, the Board has succeeded in reducing this by only 8 pounds and 4 ounces, and the horse must still carry 277 pounds and 14 ounces. It requires no discussion to conclude that this weight is a burden that should be lightened whenever circumstances permit, if the horse's power and endurance are to be conserved for expenditure in a vital emergency. To this end. the Board will recommend that, when ever practicable, the trooper's roll, comprising shelter half and pins, bed blanket, underclothing and toilet articles, be carried for him in the wagon. At other times the horse must carry it. When fully packed, the distribution of the articles above described will be as indicated in such descriptions. The bed blanket goes under the saddle and over the corona. The shelter half will be formed into a roll, containing the underclothing and toilet articles in a simple cloth case and the tent pins. This roll will be attached to the cantle, the ends falling just in rear of the rifle on one side and of the saber on the other, being snugly secured in this position by thongs or straps (choice not yet determined). The rain garment will be similar in form to the present slicker, and will be of a material similar to that known as Raino, Federal Cloth, or Protex, will be rolled and carried on the pommel, just in front of the grain roll, secured in that position by double buckled coat straps, that is, two buckles to one billet. Neither the slicker nor the grain roll will materially raise the rider's hand above the pommel. No surcingle will be provided, that on the horse cover has been made detachable and can be readily made use of when desired. The aim of the Board has been to provide a light pack, a tight pack,-a low pack and a balanced pack. An analysis of the distribution of the equipment will show that these ends have been fairly well attained, excepting of course, a pack cannot be made light and still carry all the articles required, nor can anything attached to the pommel be regarded as carried low in the strict sense of the term, but the best practicable has been done in these directions. Nothing is loose

or insecure. Nothing can rattle. Nothing glitters. All weight has been placed as low as practicable. It is true the rifle barrel rises above the horse, but as the rifle is supported at a point well below the saddle, the mechanical effect is thus about the same as though the weight of the rifle were concentrated at that point. Between the right and left of the pack the difference in weight is practically negligible, and the weights on each side are symetrically placed with respect to each other. From front to rear the burdens do not balance. Such a balance, even were it practicable, is not regarded by the Board as desirable. The saddle seat readily favors the rider's sitting precisely over the center of motion. He assumes that position naturally. The side bar was constructed with that end in view for both saddle and rider. This puts the principal weight at the desired location. The other weights are distributed so as to decrease somewhat the weight borne by the forehand, and increase that borne by the haunches. This is believed to be an advantage. While the foreleg's principal function is to support weight and that of the hind legs, to furnish propulsion, and though this natural distribution may be taken advantage of in races and similar uses of the borse; yet there are other considerations entering into the problem of the trooper's distribution of the weight, which cannot be wisely ignored. Though placing weight on the haunches may interfere somewhat with the horse's propelling power. and cut down, in a measure, his maximum speed, on the other hand, placing weight on the forehand greatly increases concussion on the almost vertical forelegs, especially on hard roads, and tends to develop stiff joints, navicular disease, sprung knees and similar injuries. Observation shows that cavalry horses in the past have generally given out in the forelegs much sooner than in the hind legs. In the future as stone roads become more common, this tendency will increase, cavalry horse has rarely to put forth his maximum speed and his work is usually done at a comparatively low rate of progression, a reasonable compromise should be effected between the loss of power due to weighting the haunches, and the increased concussion due to weighting the forehand. This has been done in the Board's distribution of the pack. The result has shown no appreciable loss of action in the hind legs. Beyond question, there must have resulted, due to this distribution, a decreased concussion in the forehand.

#### PACK SADDLE OUTFIT.

In order to be in a measure independent of the wagons the Board has provided a pack saddle outfit to be carried on a led horse and to remain constantly with the troop on the march. It comprises a pack saddle of improved pattern. The cargo on one side is a securely made wooden pannier containing the horseshoer's tools, the saddler's tools and a limited amount of farrier's supplies. That on the other side consists of five tubular iron pins and a sledge hammer, all securely carried in a kind of boot or case. These two cargoes are lashed on the pack saddle. Over all and extending well down on each side is secured a seven-eighth inch field picket line. The load on this horse will be somewhat less than that on the trooper's horses and he should have no difficulty in constantly keeping up with the troop. By this means the troop should be able to keep • its horses and equipment serviceable on the march, even though separated from its wagons for periods of several days.

# ARTICLES OF CLOTHING AND EQUIPMENT ON THE TROOPER.

The trooper on the march will wear a stiff brimmed hat with a Montana peak, without hat cord but having a string for securing it to his head. He will wear an olive drab neckerchief. His insignia will be shown in embroidery on each breast pocket of his shirt. His leggins will be of durable russet leather of the most approved Cross pattern. His spurs will be light but strong, of drop forged steel, with short, straight shanks without button on the shank, and with small aluminum rowels. The finish of these spurs will be of a blue or brown tint like the parts of the rifle. Each strap will be of two pieces attaching by buttons, the lower one to be fitted by the troop saddler, the upper one adjusting with a buckle, but to be attached or detached by pulling on the inside end of the strap. These spurs serve their purpose well when mounted, are easily put on or off, and interfere but little with dismounted work. The officer's spurs are of similar pattern but polished. All will wear russet straps in the field, the officers' black ones for dress

purposes. The cartridge belt has nine pockets, each holding ten rifle cartridges and four pockets each holding five pistol cartridges. The latter will not fall out of these small pockets. The Field Service Regulations require sixty extra rifle and twenty extra rounds pistol ammunition to be carried in the saddle bags under certain exigencies. It was impracticable to make saddle bags to carry this extra ammunition without unduly decreasing their size and strength. An extra belt was provided for this purpose. It passes over the left shoulder, under the right arm, and is shaped to fit smoothly. Although intended only for emergencies, it has proven such a success that it will probably be worn full constantly in campaign, the ammunition in the waist belt being correspondingly reduced, thus transferring the weight to a more suitable location. suspenders will be provided, the rifle sling will be adapted to this purpose when a support to the waist belt is found necessary. The pistol holster has been thoroughly revised and it is believed will now meet the aprpoval of all. The pistol is carried butt to the rear and, while the belt is still worn at the proper height, is hung sufficiently low as to permit its ready and convenient withdrawal. The lower extremity of the holster is shaped to the barrel, and the sides stitched down flat and slightly extended, to carry a convenient device for readily securing the holster to the thigh with a thong. The holster is attached to the belt by a kind of frog, to which it is pivotted, and thus adapts itself readily to any movement of the wearer's leg. It has a flap to secure the pistol in place when not in use. When in use, or there is even a possibility of its use, this flap can be buttoned back wholly out of the way. The holster is thus changed at once into the open variety. It is believed that all the serious objections urged against holsters have been corrected in this model and that it will meet with a hearty reception. The use of the lanyard is discontinued.

## REMAINING ARTICLES CONSIDERED.

The foregoing comprise those features of the Board's work that are of immediate and special interest to officers and enlisted men of the Cavalry Arm. They by no means cover the scope of the work. In addition to those enumerated

above the Board has carefully considered and determined upon, tentatively, or at least as far as lay within its power under the circumstances, the following items of equipment, to-wit: type of army wagon and load therefor, tentage, surplus kit bags, officer's clothing rolls, and baggage allowance, bacon and condiment boxes, field ranges, field forges, field desks, arm repair chests, cleaning and preserving materials, horse covers, cavessons and longes, guidons, their staffs and carriers, trumpets, lanterns, dispatch cases and record cases, field glasses, electric finders, luminous compasses and discs, fencing sabers and masks, and some articles of enlisted men's uniform especially referred for its action by the War Department.

# CAVALRY EQUIPMENTS.

President Cavalry Equipment Board.

Sir:—In compliance with your circular letter dated April 19, 1910, I have the honor to submit the following notes on equipment, etc. My duties have been such that I have not found time earlier to prepare these notes.

I think that our horse-equipment as now furnished is in nearly every item almost as bad as it can be. It was simple and reasonably satisfactory when I joined in 1883, but every "improvement" in bits, bridle, and saddle since then has, in my judgment, made them worse, until they have now almost reached the limit of unfitness.

#### SUGGESTIONS.

LEATHER: All leather to be red hemlock tanned, like that used in the stock saddle, so that new straps and patches will not be so unsightly and conspicuous on old articles.

BRIDLE: Bit and Bridoon of "eglantine" or other non-corrodible metal. (The present issue of tinned or nickeled bits are abominable. The plating soon comes off and is only an excuse for an unfit appearance at all times.)

Bit, straight branches.

Snaffle, small.

Reins, curb rein narrower and shorter than the snaffle rein, as is usual among horsemen.

Buckles, brass or bronze. (The brown paint now furnished by the ordnance department to daub on buckles, rings, etc., is abominable. It is a small matter to keep brass buckles, etc., clean and bright in garrison, and a single day's exposure in the field dulls them so that they do not glitter.)

SADDLE: The defects of the McClellan saddle are so many and so well-known in the service that it seems hardly

worth while to mention them. One or two, however, I have not heard generally discussed. The top of the pommel, where the edges of the leather are sewed together, is so high and sharp that it bruises and cuts the hand. In training and controlling a horse the hands must be held low. They cannot be so held on the McClellan saddle on account of this sharp high edge. I should, therefore, like to see the pommel smooth and round or flat on top, and as low as may be consistent with strength and space for the withers.

Skirt of flap: A short skirt on the saddle would remove the excuse for sweat-leathers. (The legs cannot be properly used as aids if there are sweat-leathers on the saddle.)

Stirrups: A narrow wooden stirrup with wide opening for the foot. If the stirrup can be covered with leather without too much additional expense it will improve the appearance. If the tread of the stirrup is too wide, as in our present stirrup, it often causes the foot to hang in the stirrup in dismounting. Moreover, it adds unnecessary weight to the stirrup.

Hoods are unsightly, heavy and useless.

Stirrup straps not to be twisted as at present. A simple strap with plain single buckle so placed as not to hurt the leg, and without keepers; the straps to be hung, if practicable, like those on the ordinary flat saddle, so that they can be quickly and easily adjusted, and so that they will pull loose from the saddle in case the rider falls and his foot catches. The flesh-side of the leather should be outside in the stirrup-strap—this makes it stronger where it bends round the ring or staple or fixture by which it is hung to the saddle.

Quarter straps, if used, should be like the simple straps with small D-rings in use twenty years ago. They should be long enough for the D-rings to come partly under the barrel of the horse, so as not to hurt the rider's leg or the horse's side. This would require a good deal shorter cinch than is now used. (The arrangement of the quarterstraps which we have been using for the last fifteen or twenty years is, in my judgment a failure. They are supposed to adjust themselves automatically, but they do nothing of the kind, while the twist in the straps turns the edges of the leather against the horse's side and

raises knots on it. This has made the large D-ring and the great clumsy plate of leather under it necessary to save the horse. These hurt the trooper's legs and prevents him from taking a right hold on the horse with them.)

Stuffing: I hope the Board will make a thorough test of a saddle with stuffing under the bars. While I doubt that such a saddle can ever be adopted in our service on account of the lack of skilled troop saddlers capable of restuffing them, especially in time of war, there is much to recommend such a saddle. The under side should, of course, be of leather and not of felt or cloth.

Staples and rings should be of bronze or brass; if of brass they should not be painted brown, but kept clean and polished in garrison.

Coat straps: I prefer whang leather thongs to coatstraps with buckles.

Seat: I prefer the seat entirely covered and, if practicable, stuffed.

PICKET PIN: Only fifteen picket pins are needed in a troop.

LARIAT: Only fifteen lariats are needed in a troop. Those now furnished are very unsatisfactory. They are woven after the fashion of window cords and are very hard and inflexible, especially when wet. A simple piece of manila rope is far preferable. It soon becomes soft and flexible. Some officers say that a flat lariat of webbing woven hollow would be the best. A good lariat is specially needed in longeing horses.

Whips: Fifteen whips and whip-stocks should be supplied each troop for use in longeing horses.

CAVESSON: Fifteen cavessons with iron nose-bands like those in use at the Mounted Service School at Fort Riley should be supplied each troop. A young horse cannot be properly trained without the use of the cavesson and longe. I am convinced from the experience I have had personally within the last year that the longe-and-cavesson is the most essential implement in the handling of untrained horses, and that the use of it in our service would have saved hundreds of fine horses

from ruin and condemnation. The cavesson described on page 160, Cavalry Drill Regulations, is absolutely useless.

SADDLE-POCKETS: The saddle-pockets should be narrower and, if necessary to have as much space as at present, deeper. As wide as they are now, it is hard to prevent them from rubbing the skin off the horse's hips.

SABRE: Sharp.

SABRE-SCABBARD: Of black steel like the rifle barrel.

RIFLE: I hope some way may be devised for carrying the rifle on the horse other than that now in use. It is impossible to ride with the proper seat or to use the leg as an aid with the rifle under it.

PISTOL: The 45-calibre Colt now issued in the Philippine Islands is satisfactory, but I should like a shorter barrel if practicable.

PISTOL HOLSTER: The butt of the pistol grip should turn to the rear instead of to the front. The pistol could then be drawn and returned more easily and naturally, and it would hang in place when one is mounted better than it does now.

TARGET PISTOL: We ought to have a 22-calibre target pistol supplied the service, as nearly as possible of the same weight and balance as the service pistol. No one can become an expert pistol shot without firing thousands of rounds, which is not practicable with the service pistol on account of its terrific range and the cost of the ammunition. It should seem that the 38-calibre revolver now in use might be reduced to 22-calibre by bushing the barrel and chambers, and then issued for a target pistol.

Bolos: There should be ten good bolos in each troop. Those now supplied by the ordnance department are of no use.

Saddle Cloths: The officer's canvas field saddle-cloth serves no useful purpose whatever, and being very sleek only makes it the harder to keep the saddle in place. I should like to see it dropped. If any field saddle-cloth is necessary it should be made of wool throughout.

Boots and Leggins: For the enlisted men I prefer the old style leggin, probably with a string or wire under the foot instead of the strap, for service; and I should like to see a neat black leggin of the Mark Cross pattern for dress.

For officers' boots I prefer the soft close-fitting legs, such as are now used at the Mounted Service School at Fort Riley. The calves cannot be properly used as aids when encased in big, stiff, hollow legs like those of our present uniform boot.

OVERCOAT: I hope we shall try the short overcoat.

CAPE: At our Northern posts there is lack of a warm outer garment to wear with our full-dress and social full-dress coats. The overcoat cannot be worn with the shoulder knots and the short cape affords little protection. If the cape could come down to the knees it would answer.

FIELD SHIRT: I should like to see this shirt replaced by a garment somewhat after the pattern of the sailor's "jumper," which has no tail to be tucked into the breeches. It would look neater than the shirt and be more comfortable.

CAMPAIGN HAT: The flat, somewhat stiff-brim hat, creased peaked (Stetson's cowboy hat) is better than the hat now in use.

HAT CORD: If a hat cord is needed at all it should not be more than half as large, either for officers or men, as the ones in use now.

STABLE CLOTHING: I earnestly beg you to give us back the white stable clothing which had become a part of the traditions of our cavalry. The filthy looking brown overalls now issued are a shame to a trooper, and it is impossible for a troop commander to tell whether his men have on clean or dirty suits. And the blue hostler clothes, which the Quartermaster's department is now beginning to issue, are worse still. If the same clothing must be worn for fatigue as for stables, why not let it be white, like the street cleaners' overalls in many of the cities?

Spurs: The spurs of officers seem unnecessarily heavy and clumsy. The spur usually worn by civilian horsemen is

sufficiently strong and much neater in appearance. The brass spur formerly worn by officers was better than the one of white metal now in use. The straps should fasten to buttons on the side of the spurs.

BAYONET: General de Negrier's "Lessons of the Russo-Japanese War" pretty nearly convinced one that we should carry bayonets in campaign. Much as we hate to admit it, every modern war has shown that a good fire-arm is of more importance to cavalry than the sabre, and I am almost convinced that for practical purposes the bayonet will be of more use to us in war than the sabre. The question is one which should be settled, if possible, before war befalls.

Very respectfully,

M. F. Steele, Major 2nd Cavalry.

# A CRITICISM OF OUR CAVALRY DRILL REGULATIONS.\*—Continued .

By MATOR H. H. SARGENT, SECOND CAVALRY,

Author of "Napoleon Bonaparte's First Compaign," "The Campaign of Marengo," and "The Campaign of Santiago de Cuba."

I N my last article in the CAVALRY JOURNAL, I stated that whatever system be adopted, whatever rules or principles be followed, in writing the commands of a drill regulations, there are certain things that should be kept constantly in view, namely, simplicity, brevity, consistency, and clearness; and, with reference to these points, I discussed and criticised a number of the commands in our Cavalry Drill Regulations. I purpose, in this article, to continue the discussion and criticism along the same lines.

- (1). To change the direction of a squad in the line to the right and halt, the commands are, 1. Squad right, 2. March, (307); and to change the direction of a squad in line to the right and continue the march, the commands are, 1. Right turn, 2. March, (308).
- (2). To change the direction of a platoon in line to the right and halt, the commands are, 1. *Platoon right*, 2. MARCH, (448); and to change the direction of a platoon in line to the right and continue the march, the commands are, 1. *Right turn*, 2. MARCH, (448).
- (3). To change the direction of a troop in line to the right and halt, the commands are, 1. Troop right, 2. March, (476); and to change the direction of a troop in line to the right and continue the march, the commands are, 1. Right turn, 2. March, (477).

<sup>\*</sup>Numbers in parentheses have reference to paragraphs in the Cavalry Drill Regulations, 1909. To simplify the discussion, the commands are generally given for movements towards only the right flank.

- (4). To change the direction of a troop in line of platoon columns of fours to the right and halt, the commands are not, 1. Troop right, 2. MARCH; there are no commands given for the movement; but to change the direction of a troop in line of platoon columns of fours to the right and continue the march, the commands are, 1. Right turn, 2. MARCH. (515).
- (5). To change the direction of a squadron in line to the right and halt, the commands are not, 1. Squadron right, 2. March, but are, 1. Fours right, 2. March, 1. Left front into line, 2. March, (621); and to change the direction of a squadron in line to the right and continue the march, the commands are not, 1. Right turn, 2. March, but are, 1. Fours right, 2. March, 1. Left front into line, 2. Trot, 3. March, (621).
- (6). To change the direction of a squadron in mass to the right and halt, the commands are not, 1. Squadron right, 2. March; there are no commands given for the movement. But to change the direction of a squadron in mass to the right and continue the march, the commands are, 1. Right turn, 2. March. (638).
- (7) To change the direction of a squadron in line of platoon columns to the right and halt, the commands are not, 1. Squadron right, 2. March; there are no commands given for the movement; but to change the direction of a squadron in line of platoon columns to the right and continue the march, the commands are, 1. Right turn, 2. March. (660).
- (8). To change the direction of a regiment in line of masses to the right, the commands are not, 1. Regiment right, 2. March, but are, 1. Change front to the right, 2. March, (791); and to change the direction of a regiment in line of masses to the right and continue the march, the commands are not, 1. Right turn, 2. March; there are no commands given for the movement.
- (9). To change the direction of a regiment in line of close columns to the right and halt, the commands are not, 1. Regiment right, 2. MARCH; there are no commands given for the movement; and to change the direction of a regiment in line of close columns to the right and continue the march, the

commands are not, 1. Right turn, 2. MARCH; there are no commands given for the movement.

As a previous discussion has made it clear that the drill regulations would be much simplified if the commands, 1. Column right, 2. March, were used throughout the text to change the direction to the right of a column of any kind from a halt or a march, so a discussion of the above examples will make it clear that the drill regulations would be much simplified if the commands, 1. Squad, (or Platoon, or Troop, or Squadron, or, Regiment) right, 2. March, were used throughout the text to change the direction to the right of a squad, platoon, troop, squadron, or regiment in any kind of a line and to halt; and if the commands, 1. Right turn, 2. March, were used throughout the text to change the direction to the right of a squad, platoon, troop, squadron, or regiment in any kind of a line and to continue the march.

It will be noted that in examples (1), (2), and (3), the commands are consistent throughout; if we wish to change direction to the right and halt, the commands are, 1. Squad (or Platoon or Troop) right, 2. MARCH, and if we wish to change direction to the right and continue the march, the commands in each case are, 1. Right turn, 2. MARCH. But in example (4) there are no commands given for changing the direction and halting. Now it must be evident to any one that there is just exactly as much reason why commands should be given for changing the direction of a troop in line of platoon columns of fours and halting, as there is for changing the direction of a troop in line of platoon columns of fours and continuing the march. If the reply be made that in this case the, 1. Troop right, 2. MARCH, is unnecessary, since the same result could be obtained by giving, 1. Troop, 2. HALT immediately after, 1. Right turn, 2. MARCH, the answer is that this same reason would justify the omission altogether from the drill regulations of, 1. Squad, (or Platoon, or Troop) right, 2. MARCH, since the same result could be obtained by giving in each case, 1. Troop, 2. HALT immediately after, 1. Right turn, 2. MARCH. The truth is, there is no reason which will justify the omission of 1. Troop right, 2. MARCH, in this example, nor is there any reason which will justify the omission of, 1. Squadron right, 2. MARCH, in examples, (6) and (7).

And as to examples (6) and (7) it is a pertinent question to ask, why should commands be given to change the direction of a regiment in line of masses and halt (791) and no commands to be given to change the direction of a squadron in mass or in line of platoon columns, and halt? Surely if we wish to halt in one case there may be just as good reason for wishing to halt in the others.

In example (5) there would seem to be no good reason why, 1. Squadron right, 2. MARCH, should not be used to change the direction of a squadron in line to the right and halt, nor why, 1. Right turn, 2. MARCH, should not be used to change the direction of a squadron in line to the right and continue the march, just as similar commands are used to change the direction of a troop in line. Consistency would certainly seem to require this; and brevity also, for the movement as now explained in the drill regulations requires two sets of commands in each case instead of one. Nor is this all, the commands here being different from those usually employed in changing direction, the squadron commander must remember that this is an exception to the general rule; and it is evident to anyone, that the more his mind is burdened with remembering exceptions, the more difficult it becomes for him to avoid errors.

In example (8) the commands are given to change the direction of a regiment in line of masses to the right and halt, but these commands are of different form entirely from any of the previous commands given for changing the direction of a squad, platoon or troop to the right and halting. Not only this, but there are no commands given for changing the direction of a regiment in line of masses to the right and continuing the march. I am aware, of course, that the drill regulations state that "In successive formations of the regiment, the completion of the movement should find the regiment halted." (757). But why should a rule of this kind be given and, especially so, since the colonel may want the regiment to be marching at the completion of the movement? And why should the rule be made to apply to a regiment when it does not apply to a

squadron? May there not be just as good reason for wanting a regiment in line of masses to change direction to the right and continue the march as there is for wanting a squadron in mass, (638), or a squadron in line of platoon columns, (600), to change direction to the right and continue the march?

Then, again, if commands are given for changing the direction of a regiment in line of masses and halting, why should not commands be given for changing the direction of a regiment in line of close columns and halting? (See example 9.) Surely there is exactly as much reason for wanting to change the direction in one case as in the other; and, therefore, exactly as much reason why, if the commands are given in one case they should be given in the other.

Now all these inconsistencies must be remembered by the regimental or squadron commander, and in this fact lies the great trouble—the source of much confusion and many errors. He must remember that there are no commands given in the text for changing the direction of a squadron in mass or in line of platoon columns and halting, but that there are commands for changing the direction of a regiment in line of masses and halting; he must likewise remember that there are commands for changing the direction of a squadron in mass or in line of platoon columns and continuing the march, but that there are no commands for changing the direction of a regiment in line of masses and continuing the march; and he must also remember that the commands given for changing the direction of a regiment in line of masses and halting are of an entirely different form than those given anywhere else in the text for executing a similar movement.

In closing the discussion of the nine examples above cited it may here be set forth as a general truth, that in similarly executed movements where one kind of commands will answer every purpose, it will invariably lead to more or less confusion and error, if different kinds of commands are employed. In similar movements simplicity is gained by using a few and not a multiplicity of commands.

Again, to face a troop in line to the rear and halt, the commands are, 1. Fours right about, 2. MARCH, 1. Troop, 2. HALT: or to face a squadron in line to the rear and halt, the

commands are, 1. Fours right about, 2. March, 1. Squadron, 2. Halt; but to face a regiment in line to the rear and halt, the commands are not, 1. Fours right about, 2. March, 1. Regiment, 2. Halt, nor are they, 1. Fours right about, 2. March, 1. Squadrons, 2. Halt, although the commands given in the text for halting a regiment are, 1. Squadrons, 2. Halt, (753); but they are, 1. Face to the rear, 2. Fours right about, 3. March. (751).

Now it will be noted that in the commands for facing a regiment in line to the rear and halting, (751), there are two preparatory commands, both of which mean practically the same thing; for when a regiment has executed fours right about it has certainly faced to the rear. And since the command, Face to the rear-tells nothing whatever that it is necessary to know, that is not told in the command, Fours right about, it is superfluous and unnecessary. But this is not all, the explanation of the commands in the text shows that the regiment is to halt after executing Fours right about, but there is nothing in the preparatory commands or command of execution that tells this fact or even hints at it; although the knowledge of this fact is just as essential to the proper execution of the movement as is the knowledge of the fact that the regiment is to face about in exactly the opposite direction.

But even this is not all; to march the regiment in line to the rear, the commands are, 1. Fours right about, 2. March, (752), and to halt is; the commands are, 1. Squadrons, 2. Halt. (753). Now it must be perfectly evident to anyone that no other commands are needed to face the regiment to the rear and halt it; and, consequently, that the commands, 1. Face to the rear, 2. Fours right about, 3. March, are entirely superfluous and unnecessary.

Since the commands, 1. Face to the rear, 2. Fours right about, 3. March, as explained in the text, have exactly the same meaning as, 1. Fours right about, 2. March, 1. Squadrons, 2. Halt, if we eliminate, 1. Fours right about, 2. March, from each set of commands, since they are common to both, we shall have left in the one set of commands, 1. Face to the rear and in the others, 1. Squadrons, 2. Halt, which must be interpreted to mean one and the same thing; that is to say, each

Major must interpret the Colonel's command, 1. Face to the rear, to mean, 1. Squadrons, 2. Halt: and this, too, not only for the reason given above, but for the additional reason that the explanation given in the text compels this interpretation. Would it be any less absurd, so to explain commands in the text as to require him to interpret, Fours right about to mean On right into line, or Column right to mean Close intervals than it is to require him to interpret the command. Face to the rear, to mean, 1. Squadrons, 2. HALT? Must it not be the source of much confusion and error to force upon the regimental and squadron commanders the burden of remembering the inconsistencies and absurdities in these written commands?

Again, to teach recruits to align themselves to the right at a halt, the commands are 1. Eyes, 2. RIGHT, (40), and to align soldiers to the right at a halt, the commands are, 1. Right, 2. Dress, (95), but to align to the right while marching in line, or in column of fours when there are no chiefs of platoons or file closers present, the commands are not, 1, Guide, 2. RIGHT, but are Guide right, (99 and 114); and to align them to the right while marching in column of fours when the chiefs of platoons are present, the commands are not. 1. Guide. 2. RIGHT, nor Guide right, but are, 1. Chiefs of platoons on the right flank, 2. MARCH. (485).

In the first place, it will be noted that Guide right in the example cited and, for that matter, throughout the text, is invariably printed in italics as a preparatory command. And since this preparatory command simply "indicates the movement" that is to be executed, (9), and is not followed by a command of execution to "cause the execution," (9), (except in a very few cases in which the Guide right precedes the MARCH in the commands for the main movement, as, for instance, in, 1. Forward, 2. Guide right, 3. MARCH, in paragraph 119), it is apparent that there is no way provided in the drill regulations for executing this simple command. There is no way; and for that reason the commands when following the MARCH for the main movement or when used alone should always be written, 1. Guide, 2. RIGHT; that is to say, should be written in a form similar to, 1. Eyes, 2. RIGHT, and 1. Right, 2. Dress: for unless this is done, unless the RIGHT is written in

capitals, the commands cannot in theory be executed. That they have for many years been executed in practice does not weaken the criticism in the least; it simply shows that these numerous mistakes in the written commands have been overlooked on the drill ground.

Secondly, there are several reasons why in indicating the guide of a troop, squadron, or regiment, in column of fours, the commands, 1, Guide, 2, RIGHT, are to be preferred to, 1. Chiefs of platoons on right flank, 1. MARCH. In the first place they are briefer and, with the exception under discussion, they are the words invariably used throughout the text to indicate the guide. Of course it is well understood that it is seldom necessary to indicate the guide in these formations since it is always on the side of the chiefs of platoons, nor is it scarcely ever necessary to change the chiefs of platoons to the opposite flank in order to get them on the side towards which the line is to be formed, for the reason that they can take their position there just as easily during the movement as they could prior to the movement. But even though it is seldom necessary to give these commands, it must be remembered that it is necessary for each soldier in each set of fours to know on which side the guide is, and this to him is the important and principal fact to be determined. The positions of the chiefs of platoons and file closers are to him subordinate facts of no immediate interest. To tell him where the chiefs of platoons are and then to require him to remember that the guide of the troop is on the same side as the chiefs of platoons and that the guide of each set of fours is on the same side as the guide of the troop only burdens him with remembering facts which would be entirely unnecessary if the direct commands, 1. Guide, 2. RIGHT (or LEFT) were used. Of course, it is apparent that the changing of the chiefs of platoons to the opposite flank may, in the mind of the commander himself, be the principal fact to be determined, but even then the commands, 1. Guide, 2. RIGHT (or LEFT) will answer every purpose in accomplishing the desired result; and though in this case the burden of remembering what these indirect commands mean is necessarily placed on the chiefs of platoons, it is well to remember that there are but two or three chiefs of platoons

in each troop and that they can more easily bear this burden than can all the enlisted men of the troop. Then, too, their average intellect being higher than that of the enlisted men, they will be less apt to make mistakes in carrying out commands of this character.

But it is to the commander himself that these inconsistencies in the text will probably give the greatest trouble; for he must remember to use one form of commands in one kind of formation and another form in almost exactly the same kind of formation, although the thing to be done is practically the same in both cases.

One of our cavalry colonels recently said to me that what he particularly objected to in our Cavalry Drill Regulations was that in the regimental drill he had to unlearn a good many of the commands that he had learned in the squadron drill, or rather, that he had to remember that many of the regimental commands are different in form from the squadron commands.

This criticism was certainly a just one; and, at the risk of repetition, it may not be out of place to look at the matter for a moment from the colonel's point of view.

Having learned that the commands for calling the squadron to attention are, 1. Squadron, 2. Attention, he now learns that to call the regiment to attention, the commands are not, 1. Regiment, 2. Attention, but are, 1. Squadrons, 2. Attention. (747).

Having learned that the commands for halting a squadron are 1. Squadron, 2. Halt, he now learns that the commands for halting a regiment are not, 1. Regiment, 2. Halt, but are, 1. Squadrons, 2. Halt. (753).

Having learned that the commands for facing a squadron to the rear and halting are, 1. Fours right about, 2. MARCH, 1. Squadron, 2. Halt, he now learns that the commands for facing a regiment to the rear and halting are not, 1. Fours right about, 2. MARCH, 1. Regiment, 2. Halt, but are, 1. Face to the rear, 2. Fours right about, 3. MARCH. (751).

Having learned that the commands for forming a double column of fours in the squadron are, 1. Double column of fours, 2. Center forward, 3. MARCH, he now learns that the

commands for forming a double column of fours in the regiment are not, 1. Double column of fours, 2. Center forward, 3. MARCH, but are, 1. Double column of fours, 2. MARCH. (799).

Having learned that the commands for forming line from echelon in the squadron are, 1. Form line, 2. MARCH, he now learns that the commands for forming line from echelon in the regiment are not, 1. Form line, 2. MARCH, but are, 1. Form line on such squadron, 2. MARCH. (804).

Having learned that the commands for changing front in mass and halting in the squadron are, 1. Right turn, 2. March, 1. Squadron, 2. Halt, he now learns that the commands for changing front in line of masses and halting in the regiment are not, 1. Right turn, 2. March, 1. Regiment, 2. Halt, but are, 1. Change front to the right, 2. March. (791).

Having learned that the commands for forming line of fours from mass in the squadron are, 1. On (such) troop, 2. Line of fours, 3. MARCH, (629), he now learns that the commands for forming line of fours from line of masses in the regiment are not, 1. On (such) troop (such) squadron, 2. Line of fours, 3. MARCH, but are, 1. Line of fours, 2. On (such)

In these articles in the Cavalry Journal I have purposely confined the discussion and criticism of the Cavalry Drill Regulations to the written commands, and have therefore omitted any discussion and criticism of the movements themselves, except so far as they may have had, in a few cases, a bearing upon the commands. An analysis and a discussion of a number of movements and of the reasons for the inclusion of some in and the omission\* of others from the text, would no doubt be of interest and, perhaps, lead us to the conclusion that some changes should be made; but in my opinion the movements described and the general tactical system followed in our Cavalry Drill Regulations are, taken as a whole, very satisfactory. The principal faults are to be found, not in the movements but in the commands.

(The end.)

<sup>\*</sup>As for instance, the omission of, 1. Right front into line, 2. MARCH, and 1. On right into line, 2. MARCH, of a squadron or regiment in column of troops.

## CAVALRY INSTRUCTION.

A NARRATIVE OF INSTRUCTION GIVEN DURING THE YEAR 1910
AT FORT SHERIDAN, ILLINOIS, TO A TROOP OF CAVALRY.

BY CAPTAIN F. C. MARSHALL, FIFTEENTH CAVALRY.

THIS is a personal experience. It is offered to illustrate the difficulties that oppose themselves to an effort to give adequate instruction to a troop of cavalry at a post typical of many of the cavalry stations in the United States, and is a frank statement of what was actually done during the year 1910.

The top soil on the Fort Sheridan reservation is a shallow black loam, over a heavy clay subsoil. This loam holds the water a long time in the spring and after each heavy rain, and is so boggy and heavy that work of any sort off the roads cannot be done until it has dried out. In the spring April is lost, and usually May as well, for any work off the roads.

There is a drill hall at this post, originally built for infantry, with a board floor. A few years ago this board floor was removed, and tanbark was put in. The cavalry and field atrillery are now allowed to use it, in conjunction with the infantry. On account of certain defects in the construction of the knee boards the hall is extremely dangerous for mounted work, which must, in consequence, be limited to very slow movements, and to small commands.

During the indoor period—November to May—the cavalry troops are allowed in the hall on alternate days, Saturday and Sunday excepted, for one hour each. On account of interference with this schedule by guard and prison guard duty it is seldom that this drill can be had more than nine days per month.

The roads in the vicinity of Fort Sheridan are generally metalled. The surfacings used are limestone macadam or clay

gravel. They are badly kept up and are rough and full of holes. In addition many of them are oiled, and all the good ones are thronged with automobiles. In the winter, due to the mild influence of Lake Michigan, there is rarely a day wher more or less thawing does not take place. This, combine with the freezing nights, coats the roads with ice. To use them, horses must be sharp shod, if it is at all icy, and must L shod to use them at any time.

Guard duty, due to the great extent of the post, and the large number of prisoners kept here, takes the men away from their horses certainly two, and usually three, days out of every rine. For example: If my troop goes on guard on Tuesday, at ten o'clock, it comes off at the same hour on Wednesday, and is on prison guard from seven o'clock until five on Thursday. The following Thursday it goes on guard again. During these three days the horses must be turned loose, and they can be groomed but twice: the morning of marching on guard, and the afternoon of marching off. If they are loose they must not be sharp shod, or they will cut each other badly. If they are smooth shod, since the corral is usually a mass of ice, they will run the risk of serious falls if they attempt to move about much. In fact one of my barefooted horses fell in the corral and broke his neck this winter.

From all these considerations, and after two winters at this station, I decided to abandon mounted instruction altogether for the winter of 1910-1911, except mounted fencing on the days the hall was available. I pulled all the shoes from the horses' feet, and reduced the grain ration to three pounds a feed. I experimented with horse exercise on the road two days, and had so many horses laid up that I decided to abandon the idea of having it at all. The horses are all fitted, and their shoes are nailed to the heel posts, ready to be put on in March, as soon as the indications are that the heavy freezing weather is over. Then, as soon as the roads are practicable, the full grain ration will be fed, and the troop will march from ten miles a day, at the walk, in the beginning, to twenty miles a day, done in four hours, as the horses get hardened. This will put them rapidly in condition, and I am sure that they will be much benefited by the rest. It would be much better, of course, if they could get proper daily exercise all winter, but as that is impossible under conditions at Fort Sheridan, I regard my experiment as the best way out of a difficult situation.

In describing the work of the troop in 1910, I will give you the history by months.

In January, 1910, we had seven mounted drills of one hour each, in the hall; all but one were bareback. There were six gymnasium drills, and one in first aid.

Gallery practice was held daily. I have used every effort to encourage this practice. A fair gallery was arranged in the larger squad room; every unqualified man was required to fire two scores daily, and unlimited ammunition was furnished the others. The gallery was in use nearly all day, and every day. Weekly competitions for small prizes were had between the squads.

Non-commissioned officers' school was held three days in the week, and as broad a course was laid down for them as it was thought they could profitably absorb. Examinations were held, as ordered, and the non-commissioned officers were graduated as provided in orders, on showing proper proficiency, in all subjects, except minor tactics. I do not believe that anyone, officer or non-commissioned officer, should ever be graduated in this subject. In addition to the non-commissioned officers, at least ten selected privates attended the weekly exercises in this subject. These exercises consisted of lectures, or problems or conferences, and the men showed unfailing interest in them.

In February the troop drilled in the hall eight times. There were six gymnasium drills, ten dismounted drills, and one in first aid.

In March the weather was exceptionally fine, and the hall was used only four times; there were thirteen mounted drills, each for two hours, three gymnaseum drills, and eight dismounted drills. The gallery was in constant use in February and March.

In April the first three days' practice march of the squadron was held; the troop had eleven mounted drills, of two hours each, two drills in the hall, and twelve dismounted drills. In May the weather was very raw and rainy. Mounted work was confined to the roads. Target practice—range firing—absorbed all available time between the 9th and the 26th. The squadron made its monthly practice march to Chicago, to participate in the Decoration Day ceremonies in that city.

Rifle practice was continued until June 4th, when it was stopped, and only such instruction as was necessary to prepare for a military tournament in Chicago was given. This duty was finished on July 16th, when the troop returned to Fort Sheridan. The remainder of this month was used in preparing the non-commissioned officers for their duties as patrol leaders at the Sparta Maneuvers. From four to six hours daily was spent on the roads in the vicinity, and special attention was given to perfecting the non-commissioned officers in map reading, in estimating distances, in the preparation of messages, and in marching. Instruction was given almost daily in swimming horses in Lake Michigan.

From August 1st to September 15th the troop was at the maneuver reservation near Sparta, and on its march home. Here its duties were the same as those of all other cavalry troops, and need not be enlarged on.

On returning to Fort Sheridan the troop at once took up its rifle and revolver practice. This duty took practically all the time available (together with practice marches and the annual inspection) for instruction until November 26th, when the proficiency test of the troop was fired, the mercury standing at 12 degrees, Fahrenheit.

This was followed, in December, by practically the same programme as described above for January. The troop got ten drills in the hall. Horse exercise was attempted twice, but the roads were so slippery that it was not considered safe, either for the men or the horses, and so it was discontinued.

At the date this is being written—February 14th—the horses are in excellent health and flesh. They are not too fat. The stable doors are kept open in all weathers; the horses are not blanketed at all, except when brought in wet, and then only until dried. They are kept in the stable, during the day time, only when it is raining hard; never on account of cold, or wind, or snow.

It happened that very few men were discharged during 1910 from my troop; only two recruits were received. Of these, one was an excellent cook, and he was put in the kitchen as soon as his preliminary drills were over. The other joined just before the tournament, was given his recruit training very rapidly, and was taken up as a private when we went to maneuvers.

Paragraph 3, General Orders No. 7, Current Series, War Department, will be full of difficulties for cavalry at stations like this one. The instruction ordered in the first portion of the paragraph can be correctly given to include rifle and revolver practice, practice marches, and camping. Patrolling on the roads can be effectively taught, but, since patrolling in war would very often be off the roads, great care must be taken to impress on the patrol leaders that this instruction is given on the roads, only because they are not permitted, by private owners, to go across the fields. My own plan is to have the noncommissioned officers explain, as the problem progresses, just where they would leave the roads, and why, and how they would move across the country to gain vantage points now inaccessable to them. Patroling at night can be taught with a much closer approach to war conditions.

I find it more profitable to teach advance, rear and flank guard duties from maps, using the one sided war game, and similarly the attack and defense of small convoys, such as non-commissioned officers might possibly be called on to take charge of.

I limit my instruction of sketching to flat sketches of the roads, but go very deep into map reading, so that my sergeants and corporals can read the war game maps correctly and rapidly. Whenever my troop marches on a terrain mapped by the Geological Survey, several of the non-commissioned officers are provided with these maps (which, after all, is our "military map") and one of them always acts as a guide to the troop. It is his duty to be able to tell me where the troop is at any given moment, and to point out on the map the prominent topographical features visible at the moment.

In addition to the general instruction described above, there is a signal party in one suqad, and in another two men are instructed in the use of the Weldon range finder.

The effort was made to play polo at Fort Sheridan two years ago. Twenty messenger horses, quite unbroken, were assigned to this squadron, and a portion of the drill ground was set aside as a polo field. The plot selected needed clearing and grading; it was cleared and the grading was commenced, but, for some reason, was not finished when the ground froze in the early winter of 1909. For the same reason the grading was never resumed, and the ground is now in worse condition than ever. The practice has existed at Fort Sheridan, for a number of years, apparently, of skinning the sods off the cavalry drill ground to furnish sods for the bare spots in the post proper. This has resulted in making the cavalry drill ground so uneven that practice with polo balls is impossible there, nor is there a place on the reservation where the stroke can be practiced, or the ponies trained. The Onwentsia Country Club, three miles distant, was thrown open to our officers, for polo playing, through the courtesy of its members. This seemed to give the chance we were looking for, and, for a time, our officers availed themselves of the privilege. The club members, however, being Chicago business men, could not begin to play until five o'clock in the evening, and this proved to be an hour that was inconvenient to the officers, and the effort to play was soon abandoned.

It became apparent that the ponies would be of no use here, so they were shipped to our friends, the Sixth Cavalry, at Fort Des Moines, where there is an admirable polo field on the

parade ground.

It is, of course, unwise to quarrel with conditions that one cannot correct, so I shall refrain from commenting on what might be done for cavalry at this station. It does seem as if stations might be found that would give greater opportunity for the development of our army than many that we now occupy. I have been stationed at Forts Meade, Keogh, Yates, Leavenworth, Riley, Ethan Allen and Sheridan. and am familiar with conditions at Forts Snelling, Robinson and Des Moines. It is my judgment that, of all these stations, Fort Riley is the only one suited to our work, the year around. Fort Robinson offers such excellent facilities for a portion of the year, that

it may also be made an exception, but the rest are, in my opinion, unqualifiedly bad.

It is to be regretted that a large reservation cannot be secured, in the non-agricultural regions in Eastern Tennessee or Kentucky, for instance, where several regiments of cavalry and field artillery could be stationed, and where they could find room and suitable conditions for field work the entire year.

In the mounted drills referred to above, describing the work of the year, excepting those drills had in preparation for the Chicago Tournament, I did not use the drill ground six times in the year. Almost all my instruction was given on the roads, and the greater part of it was designed for the non-commissioned officers. The facilities for horse training, and equitation, are so meager at Fort Sheridan, that I freely confess, my men may be said to be but little trained therein. They hardly deserve to be called cavalry soldiers at all, but rather mounted infantry.

## FIELD TRAINING VS. TARGET PRACTICE.

BY FIRST LIEUTENANT WM. H. CLOPTON, JR., THIRTEENTH CAVALRY.

In the March issue of the JOURNAL the article by Captain Booth entitled "Field Training vs. Target Practice," and the comments thereon under the caption "Cavalry Training and Target Practice," should I believe, be received as a welcome note calling for a discussion of ways and means to correct some of the present defects in our branch of the service, as noted therein.

As one who has in the past few years been deeply interested in the work that a cavalryman can do with the "infantry rifle" in competition with the infantry and others, I take the liberty of making a few comments and offering a few suggestions on the subject covered by the articles mentioned above.

The essential features of the two articles may be divided into the following:

1st. That too much time is being devoted in the cavalry to rifle practice to the exclusion of other work.

2nd. That the present rifle should be replaced by some type of arm, lending itself more readily to cavalry uses, in which weight and convenience of carrying should be the governing principles, instead of its long range effectiveness.

In connection with the first Captain Booth states, "so long as the standing is published and the proficiency of troops is compared with each other and the infantry, most troop commanders will devote all the time they can get to target practice, so as to make as good a showing as possible without regard to how much the instruction along other lines, which is not published, is neglected."

In the comments on Captain Booth's article is found that "too much time is spent in emulating and competin with the infantry in the use of the infantry rifle."

In both of these statements the authors have attempted to place the blame for other deficiencies in our training on the desire of troop commanders to compete, either through published reports or in competition with other troops and the infantry in marksmanship, and have either overlooked or purposely avoided the principal reason why so much time is now devoted to rifle practice and other work neglected.

To a certain extent the reasons advanced by them are true, but is it not more true that the prime factor in giving the men so large an amount of target practice rests primarily on the increased pay granted for qualification as marksmen, etc.

Contentment in the troop goes a long way towards additional zeal on the part of the men, both in their work and advancement in instruction. Where the men are satisfied that their interests are being promoted discontent seldom exists, but where they feel that their opportunities are being curtailed discontent follows.

This applies particularly to rifle practice, where the question of additional pay is involved, and it seems but natural for troop commanders to give their men every legititimate chance to qualify and earn their pay. The rating as published annually of the relative standing of organizations has little to do with it. Friendly competition in the squadron or the regiment when they are united, may call for extra effort on the part of troop commanders to beat their neighbor, but the direction of these efforts with reference to the army at large is not often taken into consideration. Isolated cases may be found where officers thinking they have an exceptionally good shooting troop, direct their efforts towards obtaining the highest record in the army, but the commander of an average troop is influenced but little, if at all, with this end of the work.

To offset the evils of too much target practice, two remedies present themselves, one, mentioned by Captain Booth, to abbreviate the course; the other, to discontinue the present system of making increased pay contingent solely upon expertness with the rifle.

In connection with the former I may state, that for the past five months I have had an opportunity to discuss the present firing regulations with the president of the last revision board, Major Geo. W. McIver, Ninth Infantry, and find that he is far from satisfied, in a great many ways with the present system, especially with the length of time it takes to conduct the practice.

In writing this I have his permission to submit his ideas on the changes he favors. They will be found to agree in the main with the scheme advanced by Captain Booth, and in brief be stated as follows:

1st. Provide unlimited instruction for recruits, to give them the fundamentals at the start.

2nd. Establish a record test to be fired at 200, 300, 500 and 600 yards which will be followed by all the men, qualication in the separate grades to be based on percentages made in this course.

3d. All firing to be timed fire of either five or ten shots in a given interval, for which the following is proposed:

200 yards, five shots in twenty seconds.

300 and 500 yards, five shots in thirty seconds.

600 yards, five shots in forty seconds.

This will comprise the entire course, and in order to qualify as marksman, sharpshooter or expert rifleman, the men will be required to make a certain fixed percentage for each grade.

4th. All firing to be with the battle sight except at 600 yards.

5th. The present expert test to be taken by all men in the troop eliminating the moving targets at 200 yards. A certain qualification in this test being required for final qualification in the different grades, as determined by the firing in the timed fire course.

The exact details of percentages and so on have not as yet been worked out, it being the intention to secure a table

of averages and base the percentages of qualification for the three grades thereon. The present expert test to be retained in the nature of preliminary work for the field firing and proficiency test.

The above scheme has been the result of considerable reflection and study, with a desire to shorten the present course as much as possible and yet maintain sufficient target practice to keep the efficiency of this work up to its present standard.

The elimination of skirmishing is made in the foregoing as in the end this kind of fire is nothing more than timed fire in which the soldier is required to advance hurriedly from one range to another and in no way simulates service conditions.

This seems to be a good solution for the time now required for target practice, and in so far as it relates to our service might be modified by prescribing that the preliminary course for recruits be given before they are placed in the troop, devoting mornings to the mounted work and the afternoons to range practice, with both arms.

Once a man has learned to shoot, his subsequent appearance on the range should call for little preliminary work to put him in shape again for average shooting. The rudiments are not forgotten, but a man may be off in his physical condition, therefore a little "push and pull" drill and snapping exercises for a couple of weeks before the season opens up, will give him a new start without firing a shot; a few rounds then for practice at each range, in targetting his gun, testing his hold and judgment of conditions will be sufficient to put him in good shape to fire the record test, and the minimum amount of time required.

In considering the other remedy, that of discontinuing the present system of making increased pay contingent solely upon expertness with the rifle, some difficulty may be found in bringing it about. However the question seems to be one worthy of reflection and may accomplish the desired changes, calling for equal efforts in all the elements of cav alry training.

In order to give stimulus for all around proficiency why not utilize the funds now appropriated for rifle qualification as a reward for efficiency and general ability as a soldier? Establish the grade of first and second class private as now exists in the engineers signal and hospital corps. Increase the pay slightly of the non-commissioned officers and apportion the number of first and second class privates, so that the money required to give them all additional pay will bear a direct relation to the money now used, in paying the grades in marksmanship.

Make the requirements for designation as first class private include excellence in all of the duties demanded of the soldier, *i. c.* horsemanship, ability to use the rifle or carbine, revolver, saber and general soldierly qualities.

Statistics are not at hand whereby the actual apportionment might be worked out, but it is thought that by taking the average of the amounts that have been expended in the past five years for increased pay for qualification as a basis, some schedule could be arrived at so that the two would be about equal.

From information available the following will show the data for the years 1906 and 1907, the last three years not being at hand.

In 1906 the cavalry had the following qualifications:

Expert riflemen. 282

 Sharpshooters.
 1,268

 Marksmen
 1,267

calling for a monthly additional pay of \$7,748.00.

In 1907 the figures are as follows:

 Expert riflemen
 483

 Sharpshooters
 1590

 Marksmen
 1062

requiring a monthly additional pay of \$9,309.00.

In the past three years this amount has probably exceeded so for the sake of submitting some scheme let us assume that the total amount per month now amounts to \$10,000.00. This makes an average of \$55.00 per month per troop.

With this figure to work on establish a schedule of pay as follows:

1st. Sergeants	\$48	oo instead of \$45 oo
Sergeants	32	oo instead of 30 oo
Corporals	23	oo instead of 21 oo
1st. Class Privates	17	00
2nd. Class Privates.	15	00

this would allow 14 first class privates per troop.

Such a change will require congressional action, but if it can be shown that the scheme involves nothing more than changing the designation of the pay from "increased pay for rifle qualification" to "good conduct" pay in which the ability to shoot is only a part of the requisite, instead of the sole consideration, it might be brought about without much difficulty.

In considering the second question, whether the present rifle should be replaced by some type of arm lending itself more readily to the needs of the cavalry, I think I may safely state, though to my knowledge the question has never been placed directly before the members of the cavalry teams I have been associated with, that none of them favor the present rifle simply because it puts us on a par with the infantry in competition.

The faults of the present heavy weapon as relates to the cavalry arm are too grave and conspicuous for any one who has the interests of the cavalry in mind, to want to retain it, and if the matter was put to a vote amongst those who have been and still are interested in competitions, I believe there would be a unanimous decision in favor of a lighter arm. The question of competition not being considered.

I am not however in favor of abolishing competitions for the cavalry. Should a carbine be adopted the old system of competitions could be revived, not necessarily to be held at different times and places as formerly but when the department competitions are held segregate the men using different arms into their own class, proceed with the competition as at present, but classify the men as winners either in the department rifle or carbine competition. The work could progress simultaneously, the only difference being that two bulletins would be required and the title of the medals changed. The proportion of medals would remain as they now exist.

For instance if there are fifty men present armed with the rifle and thirty with the carbine, let the course be the same for both, but have the men armed with the rifle compete amongst themselves and the men armed with the carbine act similarly.

Assuming the above to exist the following distribution of medals would be made:

With 50 competitors, the team will consist of 10 men, this would require 1 gold, 3 silver and 6 bronze medals; with 30 competitors, the team will consist of 6 men, this would require 1 gold, 1 silver and 4 bronze medals, in all 2 gold, 4 silver and 10 bronze medals the same as if all were competing together. This would adjust the matter of department competitions.

The question of army competitions would require adjustment by either allowing the two arms to hold separate competitions, or by resorting to the former scheme of granting an allowance in the form of a handicap for the men armed with the carbine, based upon the relative efficiency of the two arms.

In considering the question of organizing a cavalry team for the national matches, the adoption of a carbine for the cavalry would not interfere in the slightest, as for this work rifles could be procured as was done in 1906 and the cavalry ask no odds of anyone.

The defects that have been pointed out in the old carbine as not being a good long range weapon. I think, will be found to have disappeared with the introduction of the present shaped bullet and the superiority of manufacture of the ammunition generally, over that we used when armed with the carbine before.

When we consider that while using the carbine, the use of the sling as an aid in firing was scarcely known in the cavalry, due to its absence as part of the equipment, its retention both as a carrying device and as an aid in firing should be advocated.

Personally I am very much in favor of discarding the present rifle and adopting a lighter arm, better designed for the use of our branch of the service.

## COMMENTS.

The foregoing is a very interesting paper which should be published in the Cavalry Journal, if for no other reason, at least to keep cavalrymen thinking as to how we may improve cavalry.

I still believe that a radical change in the system of instructing cavalry is much needed, especially with reference to the use of the three arms other than the rifle or carbine, and since this question is one not to be decided lightly and, since to obtain a suitable cavalry system, one must examine any proposed scheme to the very smallest detail, thus leading to countless ramifications, a specially selected Board of cavalry officers should be set to work at once to determine:

I. What is the best cavalry organization for the cavalry of the United States?

2. What is the best equipment for such cavalry? (A proper board is, of course, now deciding this question, a little out of order, to my mind, certainly as organization should come first.)

3. What shall be the system of instruction to be imparted to cavalry?

When these questions have been studied thoroughly and a report thereon made, then the Chief of Staff will be in a position to recommend a well balanced scheme for improving the cavalry.

S. X.

# A PROPOSED METHOD OF LINKING AND DIS-MOUNTING TO FIGHT ON FOOT.

BY CAPTAIN HOLLAND RUBOTTOM, NINTH CAVALRY.

In our present system of linking horses, and dismounting to fight on foot the writer has often been impressed with the slowness of the progress which a body of cavalry is obliged to go through when it is necessary to change from mounted

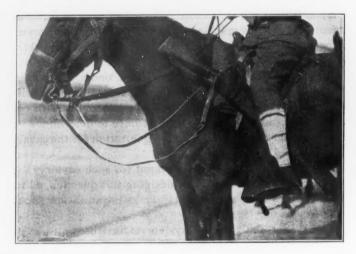


PLATE I.

Showing the proposed link and the manner of fastening when not in use.

to dismounted action. Imagine a troop under fire trying to link the horses after dismounting, drawing the rifles out of their scabbards, crossing the near stirrup in front of the pommel and then forming a column of threes on one side of the column of led horses. Then, before a skirmish line can be formed by the troop as a unit, the platoons must all close up in

column. Then, and not before, the troop can be formed into a skirmish line.

The writer has a different scheme to propose and has proved by a number of experiments that it will work.

### PROPOSED CHANGES.

There are four radical changes in this scheme:

- 1. The horses are linked and rifles drawn from scabbards while mounted.
  - 2. The men in each four dismount and move in the in-



PLATE II.

Showing a set of fours with horses linked and the men at advance rifle, ready to dismount to fight on foot.

dicated direction passing in rear, instead of in front, of their horses.

- 3. A column of threes is not formed at all, but a skirmish line is formed at once as soon as the men dismount.
- 4. The troop may be mounted again and put in motion without waiting to unlink or return rifles.

#### THE LINK.

The link adopted for this purpose consists of two straps, one about 33 inches long with a snap at each end, the other

about 18 inches in length, having a snap at one end and a ring at the other.

The object of having the link made in two pieces is that, if long enough to snap into the pommel ring, a single strap would be too long to lead a horse fastened to the halter ring of another horse. When the horses are not linked, the short piece is snapped into the near pommel ring. The long piece is fastened at one end by its snap to the ring of the short piece.



PLATE III.

At the command "ACTION LEFT," the men. (Nos. 1, 2 and 3), dismount at once and, passing in rear of their own horses, move quickly towards the left, forming in line of skirmishers, each set of threes opposite their own horses.

The other end is snapped into the lower ring of the curb bit, the ring of the snaffle bit, or the halter ring, depending upon the horse to be led. Some horses lead better by the halter but most horses lead better by the bridle, either the curb or snaffle, and cannot pull so hard as by the halter.

For experimental purposes the writer has adopted a few commands:

# 1. TO PREPARE TO FIGHT ON FOOT.

Being mounted to a halt, walk, trot, or gallop in column of fours, the command is given:

# "Prepare to fight on foot."\*

Nos. 1 and 2 unsnap the long piece of the link from the short piece, each passing the former to the man on his left who then snaps it into his own horse's upper halter ring (D ring).

No. 3 unsnaps his whole link from his pommel ring; and passes it to No. 4 before linking No. 2's horse. Thus No. 3,



PLATE IV.

Showing method of linking. Link snapped to upper ring of halter No. 4 leading No. 3's horse by the entire link. If necessary to have his right hand free to defend himself and horses, with rifle, saber or pistol, he can link No. 3's horse to his own.

as well as 1 and 2, has the use of his reins until ready to dismount.

Nos. 1, 2 and 3 then take the position of advance rifle.

<sup>\*</sup>If this system be adopted, the word "prepare," could be omitted, but it is now used to avoid confusion with the authorized command, "To fight on foot."

<sup>†</sup>In case No. 3 finds it too difficult to unsuap the link from his pommel ring, a ring to snap the link into may be fastened by a short strap to the pommel ring.

All of this requires less than ten seconds from the time the command is given until all are at advance rifle, the troop meanwhile continuing the march at the same gait.

While linked the troop may be made to change direction, increase or decrease the gait or may be brought to a halt as desired.

## 2. METHOD OF DISMOUNTING.

"Action right" ("left," "front," "rear," "right front," "left front," "right rear," or "left rear," according to the direction desired to have the skirmish line facing).



PLATE V.

Mounting without unlinking or returning rifle, which is held in right hand over against the horse's off-side. After mounting, rifles are returned and horses unlinked while moving in any direction and at any gait, or at a halt, as desired

No. 4, the horse holder, remains mounted and is ready to lead the horse of No. 3 by the entire link.

The troop halts at once. In halting most horses when linked naturally move their haunches outward. If not, the riders may cause them to do so, sufficiently for dismounting. Nos. 1, 2, and 3 dismount at once and passing in rear of their own horses move quickly toward the direction indicated.

### 3. FORMING THE SKIRMISH LINE.

If "action right" be given, each set of threes, regardless of the order of each man in the set, forms a skirmish line toward the right opposite their own horses. The guide in the troop is center unless otherwise indicated.

As soon as all are in the line, intervals may be increased, if necessary and the line halted at a designated place.

"Action left" is similarly executed. In "Action front" ("right front" or "left front") the troop dismounted forms as in "As skirmishers, Guide right," moving in the direction indicated and regulating on the leading set of threes.

In "Action rear" ("right" or "left rear") the movement is executed similarly, considering each set of threes to have faced about, the skirmishers forming line and moving in the direction indicated, regulating on the rear set of threes.

#### 4. METHOD OF MOUNTING.

The men are mounted again as in the present system, except that, where it is necessary to get away rapidly, as when under fire while mounting, each man mounts without waiting to unlink his horse or return his rifle to the scabbard and each set of threes passes in rear of their own horses. The easiest way to mount while holding the rifle in the hand is to grasp the rifle in the right hand by the upper end of the sling or by the barrel, hold it over the right side of the horse, the right forearm across the saddle, the rifle suspended, muzzle up. The horses can thus be quickly mounted and the troop put in motion, at a gallop, if desired, in less than ten seconds after the command "mount" is given, provided that the led horses are brought up to within ten yards of the skirmish line. The horses are unlinked and the rifles returned while the troop is in motion.

#### GENERAL REMARKS.

The matter of the kind of link used may seem at first glance to be unimportant. However, if a man is under fire and obliged to go through a slow process before he can get into a skirmish line, or before mounting when trying to get

away, he would probably look at the matter differently. It is a well known axiom that cavalry is most vulnerable while dismounting to fight on foot or while mounting after a dismounted action.

Suppose a body of cavalry is marching along in columa of fours and expects to be fired upon any moment by infantry or dismounted cavalry. The commander can give the command "Prepare to fight on foot." The horses thus can be linked at once and the rifles advanced and the men are ready to tumble off their horses and form a skirmish line in any direction as soon as the command is given. Moreover before dismounting they are ready for a certain amount of mounted fire action, if necessary. After being prepared to fight on foot, the command can march any distance that might be required almost as well as before.

An objection has been made that if one of the horses should be shot while linked it might cause considerable inconvenience and confusion. The same objection applies equally to any method of linking, except that in this case the men may still be mounted. In reply I would say that with this system it would be easier to unfasten the injured animal than in the old system; moreover with a saber, sharpened during campaign, it would be very easy for a man to cut one of the links if necessary.

Unfortunately no one has ever yet discovered any means or method by which one of the combatants may injure the other without the former taking some risks.

If cavalry is to preserve its reputation for superior mobility, it certainly ought to be able to change from mounted to dismounted action, and vice versa, with the least possible delay.

It is believed that the necessity for a column formation dismounted is exceptional, as a troop should be able to go most any place mounted where a column formation can go dismounted. Where the necessity exists for such formation it can be obtained by giving the following command:

1. Form column on left (right) flank. 2. DISMOUNT. This after the troop has executed the command, "Prepare to fight on foot."

## THE FORT RENO REMOUNT DEPOT.

BY GERALD E. GRIFFIN, VETERINARIAN, THIRD FIELD ARTILLERY.

In Canadian County, Oklahoma, six miles west of the "dry" and thriving town of El Reno, is situated Fort Reno, well and favorably known to the Army as a remount depot. It is surrounded by a large reservation of rolling prairie that slopes gently to the north branch of the Canadian river.

It was my good fortune to be ordered to visit this station early in November of last year, with the object of acquainting myself with the methods employed there in preparing young

horses for the military service.

Soon after my arrival, on a Rock Island train, at the post station I was met by a tall, robust, soldierly looking man, he being the sole occupant of a wretched looking express wagon and the driver of a not very spirited pair of mules harnessed thereto.

He remarked with a twinkle in his eye that I was getting a rather cool reception and that my telegram had not been received until after the arrival of the train. At this he introduced himself as Captain Hardeman, 10th Cavalry, and I knew I was in the presence of the Commanding Officer of the depot.

I rode with him to his quarters where he made me at home, and during our trip from the station I noticed that he was very handy in his management of a pair in harness. Before my visit to the depot ended I also noticed, among other things, that this genial man was not only a good driver and the Commanding Officer of the place but that he was also the Quartermaster, the adviser, the friend, the boss, the well informed horse handler, the farmer, the fatherly friend and the motive power of the establishment; and in addition a just disciplinarian and true, conscientious soldierman.

After the usual cavalry tactics of sizing up a new military acquaintance, I was informed that whenever I was ready to look around there was a saddle horse at my disposal with a choice of saddles. I decided to commence operations at once and quickly changed into riding togs. On repairing to the back yard I found Captain Hardeman holding two powerful sorrel geldings ready saddled; one of which he offered me, remarking as the Spaniard does, that the horse was mine.

We hadn't ridden far until we met, and I was introduced, to Lieutenant Ennis, First Field Artillery, Captain Hardeman's able assistant. He is a young man standing about six feet two and built in proportion; a good natured, even tempered, kindly soldier, gentle of manner and speech and an able and true horseman.

We leave Mr. Ennis at his work and proceed to make the rounds of the stables, pastures, farm and training grounds, and return late in the evening, I enthusiastic and well pleased with what I had seen and learned.

The same evening I had the pleasure of meeting Veterinarian Brown of the Quartermaster's Department, who has charge of the veterinary hospital, an immense affair capable of accommodating one hundred and fifty animals, an able and painstaking veterinarian from whom I absorbed many valuable ideas during my too short visit.

The Fort Reno Remount Station is not a show place Thirty years ago it was an old frontier post. It had been abandoned for several years before the depot was established, and as a consequence the old buildings fell into a dilapidated condition, a condition that will not admit of repair except in a few instances.

Shelter had to be provided for the animals, wells had to be driven or dug, fences had to be built, hundreds of horses had to be fed and attended to, training had to be started; and all this with a small force and little money, for it may be remembered that the powers were not very liberal in the matter of expenditures.

Everything has been done that it was practicable to do with the funds at the disposal of the Quartermaster's Department and although General Aleshire is the founder of the remount depots he has sacrificed everything here to the preparing of young horses for service in the organizations, and so effective has this sacrifice been that this remount station has become, in a few years, famous throughout the service for its sound, tractable, fearless and well trained young horses of excellent conformation.

It is hoped that within the next few years sufficient money may be available to replace many of the wretched structures now surrounding the parade ground.

And now a recital of the routine work of one day may be the means of conveying a fair idea of what the officials at Fort Reno are doing every day in the year, except Sundays and legal holidays.

At five thirty a. m., turn out and get into working clothes; at six fifteen, breakfast by the light of a lamp when the nights are long. At six thirty saddle up and make the rounds of the stables where the horses in training are in hand. Each man is responsible for seven horses and sees that the watering and feeding have been attended to, that the sick and injured animals are sent to the hospital accompanied by their respective cards, and that the preliminary training of the timid and very green horses on the longe or reins is commenced on the parade. See that the more advanced cavalry animals, numbering about one hundred, are properly saddled and bridled and started on their way to the training ground, where Lieutenant Ennis will take them in hand presently, and supervise their work in hourly batches of thirty until noon and commence again at one thirty and continue until five. Supervise the proper harnessing and hitching of artillery horses in teams of six, to sand laden caisons, and see to it that they are changed daily to different positions in the team and in the pairs composing it; that they are started on their hourly trips properly coupled and mounted and that they are up in the collars and pulling steadily. Be on hand at the critical moments to advise patience and gentleness in handling, to frown on harsh tones, to admonish the hasty of temper and commend the gentle hand and low pitched voice.

It is now about seven o'clock and things are fairly under way but there still remain to be seen the finished horses in

pasture awaiting shipment to troop and battery; the Virginia colts also must be inspected; the condition of the Missouri horses in their pasture must be examined and the two-year-olds must be investigated. Is there sufficient water in the tanks of the different pastures? Are the wind mills in proper working order and are they properly oiled? Has the morning feed for the pastured animals been distributed? Have any of the loose animals been injured in the night? Are all the horses present and accounted for, and are any of them sick? What is the condition of the fences, the gates, the field shelter sheds and the feeding troughs? Are the employees doing their work?

We ride to the trained horse pasture, where forty-five are in waiting, and inspect, handle and count them, and even ride some of them without the aid of a halter or bridle of any kind. They have collected around the breast high feed troughs where the feed wagon is distributing the morning ration of cracked corn and corn fodder. They look healthy and are in fine condition, and we move among them on foot as freely as we would among a troop or battery of old horses turned loose under similar conditions.

One of the feed troughs has a board loose, it must be attended to immediately. We find the tank full of water and the overflow properly drained. The pump is working in a satisfactory manner and the fence is reported to be in good condition by the fence rider.

Off we ride to the Virginia horse pasture and here awaiting the arrival of the feed wagon, we find sixty-five young horses ranging in age from two to four years; thoroughbreds; three-quarters; half and quarter bred. They do not impress us at first blush on account of their ragged and flat looking appearance compared with the trained horses we have just seen. Their breeding does not show as plainly as we expected; we have to hunt for the points, but these animals are young and immature and are mostly underbred. Then too, we know that the thoroughbred does not show to advantage at pasture in the late autumn; he must be well taken care of to show to advantage.

We have always ridden thoroughbreds ourselves and predict that when these youngsters get their full growth they will fill out and appear stronger and more robust. There are many fine shapes among them, indicative of speed, endurance and jumping qualities. There, for instance, is a slashing looking bay that we would like for our own use, but our jumping days being nearly over we pass him by with a sigh for the days that have gone. These animals have not been trained yet, but they are fearless of our presence among them. We find everything all right here except that the overflow from the tanks is not properly drained.

The north doors of the shelter sheds must be closed here as a "Norther" is forecasted for Oklahoma. Yes, that woolly filly looks thin, weak, miserable and hungry; she must be brought in and taken care of.

Here comes the feed wagon. How eagerly they gather around the troughs and gaze high-headed. You can see the thoroughbred cropping out now in the twitch of the nostrils, the restlessness of the ears, the glint of the eyes, the impatient pawing and the elastic play of the muscles of the shoulders and quarters.

Some day, perhaps, one of these chaps will carry off the international military ribbon in New York or London. Will it be the slashing looking bay or that short coupled, deep chested, strongly built, brown filly?

We cross a fenced field where an attempt had been made to plow it by means of steam but the ground was so hard, dry and unyielding that the work had to be abandoned.

We pass into an immense pasture, studded near its eastern extremity with shelter sheds, wind mills and feeding troughs, and presently we see approaching us from the west, squads, platoons, troops and squadrons of horses, now walking slowly, now throwing up their heads, pointing their ears inquiringly and stepping out more briskly until finally as the noise made by the feed wagon is recognized they again lower their crests, protrude their muzzles and all gradually break into a slow trot, while here and there a squeal is heard as some playful colt flattens his ears on his neck and tries to kick or nip his neighbor.

On they come to the number of seven hundred and odd, and mass themselves around us, all heads pointing to the fast approaching feed wagon.

These are the Missouri horses, the back bone of the cavalry and artillery, ranging in age from three to five and in height from fifteen to fifteen and three-quarter hands. Nearly all of them are good cavalry shapes with a sprinkling of first-class artillery fellows; the latter possessing heavy driving muscles, shoulders well formed for the collar and showing good conformation and well shaped feet. All of these were inspected, examined and passed by Captain Kirby Walker and Veterinarian Turner of the permanent horse board stationed at Kansas City. The average price of these horses is in the neighborhood of one hundred and fifty dollars. After training many of them will be worth three hundred.

We dismount and walk among them, as it is the custom here to get the confidence of the young horses by this procedure. We handle numbers of them and pat them on the head, neck and shoulder. They take our movements as a matter of course and show no alarm whatever at our presence in their midst.

The morning ration is soon distributed and they partake of it with little of the disturbance one would naturally expect. Not a cough, cold or inflamed eye, in hearing or sight. Their health and appetite appears to be perfect. Their condition and coats are splendid. We go through them thoroughly and two or three that show evidence of having been kicked recently are sent to the hospital in company with one that exhibits a fresh wound on the off hind pastern. After feeding they are all passed through a shoot and counted; one is found missing but is discovered later, by the fence rider, and so reported. Having looked into the condition of things in this pasture we ride to the pasture of the colts.

The colts have been fed long ago and are well scattered but at our approach to the feeding troughs they begin to assemble and gaze at us in an inquiring manner. Some of them nose our horses, and even our persons, after we dismount among them. There are over one hundred of these youngsters here ranging from one and one-half to two years old. Some of them were purchased by Captain Kirby Walker and others by Lieutenant Ennis. They are a fine, promising lot of cavalry youngsters and show lots of breeding, splendid shapes and plenty of dense bone and good, hard muscle; all of them possess good eyes, are wide between the ears, have ideal withers and are well ribbed up. We notice several "Diamond R" colts in this pasture, indicating that they came from the Rangeford ranch in Wyoming, a splendid recommendation.

It was learned that the average price of these colts was seventy dollars; they will be trained at three years and I have no doubt but that many of them will develop into ideal chargers. They were all present or accounted for and looked well.

It was now time to ask a few questions, so we propounded the following, among others, and quote substantially the replies given by Captain Hardeman:

"You know I have authority to purchase one horse for my official use. May I select one of these 'Diamond R' chaps?"

"I am very sorry but they are not to be sold or issued until they have reached the proper age. Such are my orders."

"How about the Missouri, the Virginia and the trained horses?"

"You may select any one of these and he will be sold to you at what he cost the United States. You may even select one of the Montana horses now in training."

"Which lot do you consider the best?"

"Well, that is a matter of taste and judgment, and perhaps sentiment also. I am from Missouri, myself, and have a strong leaning towards the horse product of that state. It isn't all sentiment, either, I can assure you."

"Please give me your opinion of the thoroughbreds?"

"The thoroughbred is the foundation of our best strains of horses. He is all right in his place, at the head of a stud, as a charger, a hunter, a jumper or a runner, but he must have more than pedigree. He must have conformation, height, weight, disposition and intelligence and for the majority of these combined in one horse we must pay a good price."

"Would the thoroughbred make a good cavalry horse?"

"Yes, he would, but he must be of the right kind and in addition to the qualifications I have just mentioned he must be

strong, steady and level headed; the supply of such, so far as I know, is, at present rather limited."

"What do you think of the scheme now being agitated of placing first-class stallions in the hands of the Agricultural Department for the purpose of breeding to approved mares of farmers; the War Department to have an option on the colts produced?"

"We will have to adopt some such scheme in the near future as cavalry and artillery horses are becoming scarce and expensive. A scheme like the one you have mentioned would solve our army horse problem in a few years."

"What percentage of 'I. C.' horses do you have, and do

you have many incurables?"

"As to the incurables, we meet cases, of course, that are beyond human aid. Let us ride over to the 'I. C.' pasture and there you may see for yourself what 'I. C.'s' we have accumulated in about a year. We don't give them any grain."

We rode to a well-grassed and watered pasture where a few horses were limping around. On a quick diagnosis we thought two had disease of the navicular articulation; one a large, low ringbone; one an incurable spavin of the near hind; one "heaves." A wretched looking bay had a nervous disease of some kind that affected his locomotion posteriorly; another had chronic laminitis and still another has what must have been at one time, a fracture of the suffraginis of the off fore.

It was plain enough that all of these troubles developed after purchase. The surprise was that there were not more cases; for if my memory serves me right, we used to have, twenty years ago, as many as seven per cent of recruit horses go on the "I. and I." report inside of a year after their arrival at station. Either the class of horses now inspected is improving, or the examination is closer; I am inclined to believe the former is true.

It is now fifteen minutes of noon and we must trot out to get back in time for luncheon. As we come in sight of the training ground we see Mr. Ennis marching in with his last batch of the morning, composed of thirty-one Montana horses. For it was Montana broncos that were being gentled and trained at that time. Awkward, angular, big-headed, sickle

hocked, heavy boned, snorty looking brutes that reminded one of the British Army in the Boer war. All of them were branded, needlessly enough, except for the information of the myopic individuals who reared them on grass and water.

We partake of luncheon with the appetite of troopers and at twelve thirty repair to the office where the daily tussle with the official correspondence takes place and eats into the time to an amazing extent.

Before we realize what is happening the men are out on the parade longing, driving, handling and gentling a squad of raw Montanas.

Over there in the corrals they are starting out for the afternoon's work, and out in front of the largest stable a squad of men are trying to hitch a team of six equine devils te a caisson. All of this work is going on without the familiar military expressions of impatience and without a spur, jerk or whip.

Off they all go to the grind and the procuring of the daily bread by the sweat of the brow and the lather of the skin, and out we go on their trail to see that they do the sweating and lathering to the best advantage, and that the bread already partaken of is decently digested, as it should be, by hard work.

The cavalry trainers form file, twos, fours and platoons; they change direction constantly; they go through half turn in reverse, individual circling, halt, back, forward, trot, gallop, disperse, reassemble, dismount and mount near and off sides; turn and twist in the saddle and finally slide off over the croups of these broncos—money couldn't hire me to do the latter. At one time they did haunches in and two track work, but these have been abandoned recently. They lead these young horses around by their bridles—always the snaffle. They handle them all over, lift up their feet and hammer on them, and finally they take individual rides, well scattered, before returning to stables for the next batch at the end of an hour.

We now turn our attention to our artillery friends. Here they come up the heavy, sandy trail, all of them in the collars and down to hard work. The drivers, each armed with a whip encourage them by soft, unmeaning but soothing horse talk. Now they form left front into line and each saddle horse eases off smoothly as the drivers let the reins pass slowly through their fingers. After a breathing spell they start off in column, each team doing fairly well. There is one devil, the off swing in the second team, who is making a lot of trouble. He looks like a fighter, but there is no one to fight him at this depot and the "pin-headed beggar" begins to understand that there may be something after all in kindness and gentleness; which I take it is the motto of this institution.

The work continues hour after hour and batch after batch, without let up, until the five o'clock bell rings at the office, and by this time all of those in training have had their little lesson of one hour's duration. They have been at it about three weeks now.

Gentle reader, when depot horses reach you, even those Montana broncs (may their family decrease), be kind to them, be polite to them, be gentle with them. Place them in the hands of the old steady soldiers, if there are such in your organization, and save them for a while, at least, from the leather handed, inconsiderate and verbose recruit with the high-pitched, unmeaning vocabulary of Anglo-Saxon bad words, undisciplined temper, jerkings of the bits and cruel cinchings of girths. These depot horses have been trained, not broken, and have been brought to a decent understanding of man and his movements while here, a training that has not fallen to the lot of many horses with whom I am well acquainted.

At last we hear the recall bell and at its mellow notes we turn our horses for the post where we unsaddle, water and feed. Again we make the rounds of the training stables and see that each animal has his due.

How quietly and smoothly things run and how fearless, even these branded broncos of the prairies are of the movements of the men who handle them.

We visit the veterinary hospital on our way home and count thirty-two cases there, mostly surgical, and we see by the board that there are twenty-eight minor cases under treatment outside. The hospital is well equipped and supplied and Dr. Brown informs us that all animals are protected against "shipping fever" by serum injection before being placed aboard the cars for shipment to station.

It is now almost six o'clock and we have barely time to dress for dinner, which is graced by the presence of Mrs. and Miss Hardeman; Mrs. Ennis and her manly little son of eight. The talk is mostly about horses and the work in hand, and the changes to be made. It struck us that the station is a very lonesome one for refined women.

All of the employees are civilians and are trained to the work by Captain Hardeman and Lieutenant Ennis. That a man is a "bronco buster" or a "cow puncher" is not a recommendation. There is no "busting" done here; the training must be accomplished with the snaffle and without spurs or quirts.

Captain Hardeman has devised a system of rewards and punishment for these men which works very well. The men are graded according to their work and their grading is posted weekly on the bulletin board at the office; a high grade bringing an increase in pay. There is also a black list and the man on this list must walk except when he is working.

While smoking our cigars, after dinner, some of the men drop around with their little troubles and complaints which are tactfully handled by the Commanding Officer.

During our visit \$85.00 was subscribed by the men for the children's Christmas tree, and the weekly dance of the employees and their families took place in the old hop room where many an army belle reigned in the past.

It is now eight thirty and time to retire. I turn out the light and try to think over the day's work and am comparing the slashing bay thoroughbred, before mentioned, with a strong looking Missouri sorrel colt that had caught my fancy when I am disturbed by the voice of Captain Hardeman who informs me in simple English that it is now 5:30 a. m. and time to turn out for breakfast and the work of another day. He had fed and watered the two sorrels already.

This is Fort Reno as I saw and enjoyed it and this is the simple life of these officials whose untiring work has made the horses from this station famous.

Is this Remount Depot an economical project?

Is it worth while?

Is the service bettered by its establishment?

Will the Quartermaster General improve and enlarge these depots?

These are questions that I have had to answer a hundred times since my visit.

I know the depot scheme is an economical one and for the following reasons:

- 1. Young horses are bought cheaply and before being exposed to the diseases of sales stables and stock yards.
- 2. These young horses are started in the right direction by the depot system of training, and the mishandling of the farm horse-breaker, horse-dealer and (must I say it) the troop "bronco buster" is thus eliminated.
- 3. Half of the forage consumed is grown on the bottom lands of the reservation at about half the market price.
- 4. By the depot system contagious and infectious diseases among army animals have been practically eliminated by, what to all intent and purpose, is an extended period of quarantine at these places.
- 5. These young horses are received at these stations free, and are kept free from avoidable colt diseases which frequently weaken the respiratory and the circulatory organs to such an extent that many of the old time remounts went on the "I. and I." report from these troubles alone.

I believe the work is well worth while; any work that betters or improves the service in any way is certainly worth while.

The service has been bettered by the establishment of these depots. They have been instrumental in arousing an interest in horses, riding and training that is a source of wonder and of glad surprise to everybody in our army.

They have been the means of improving the class of horse in our mounted service, and have contributed largely to forcing officers to look closer to the breeding, conformation and style of their private mounts until nowadays no self-respecting officer, entitled to be mounted, will look at anything but a well bred, well set up animal for his own use.

As to the intentions of the Quartermaster General I know nothing. He has made a brilliant success in the establishment

of these remount depots and it would be surprising indeed if he decided not to give them his vigorous support in the future. The establishment of these depots was an innovation in our service, and the only one, too, of which I know, that has escaped being clamped to the anvil of adverse criticism. The reason is not far to seek. We all recognized a good thing at the same time.

After one has visited an interesting public institution for the first time there ever remains with him a strong impression that invariably asserts itself when that institution, or its work, is seriously recalled. The one left with me is the memory of the arduous work of the officials at Fort Reno and the expense they must incur in entertaining the numerous visitors, officials and semi-official, most of them strangers who must be cared for during their stay at that station. The expense of this entertainment must, at present come from the private funds of the officials.

As a purely business proposition it looks to me that there should be an additional officer stationed at Fort Reno to attend to the paper work, at least; and that the Commanding Officer should be given the pay of a Lieutenant Colonel or be furnished with sufficient public funds to entertain the constant flow of official visitors and others for which there is no accommodation nearer than El Reno, six miles distant.

The Fort Reno Remount Depot is still in its infancy. It has just passed through its teething stage with the ungrudging help of Captain Hardeman and Lieutenant Ennis; may they still continue to stand by and train it in the way it should go the help it to retain the envious reputation it has gained.

#### THE CAVALRY OF THE BRITISH ARMY.

(Gathered from various sources.)

THE British Cavalry consists of thirty-one regiments, divided into three regiments of Household Cavalry, and twenty-eight regiments of the line:

The Household Cavalry comprises:

Two Regiments of Life Guards;

One Regiment of Horse Guards.

The Cavalry of the Line consists of:

Three Regiments of Dragoons,

Seven Regiments of Dragoon Guards,

Twelve Regiments of Hussars,

Six Regiments of Lancers,

of which fourteen regiments are serving at home, nine in India and five in South Africa and Egypt.

War Organization—The war organization of the Cavalry of the Line at home consists of a cavalry division of four brigades, each comprising three regiments, and in addition two regiments are alloted for mounted brigade duties.

With a view to providing the machinery necessary for the training of draughts and remounts for the cavalry regiments in the field, it has been decided to form reserve cavalry regiments on mobilization.

Depots—Cavalry Depots are being established in each Command, except Aldershot, at which four or six regiments will be affiliated. In the Irish, Eastern and Northern Commands these depots have been formed and as soon as accommodation is provided depots will be established at Dunbar, Seaforth and Bristol in the Scottish, Western and Southern Commands respectively.

The depots wil be used during peace to train regular recruits for three months before being sent to their regimnet, or linked regiment at home; to train officers and non-commissioned officers of Yeomanry; as a place of storage of arms, equipment, clothing and necessaries of regular reservists. During war, as a mobilization center where cavalry reservists will join; and for the reception and clothing of recruits, the whole of whose training will be carried out with a reserve cavalry regiment.

Reserve Cavalry Regiments—After mobilization is ordered, a reserve regiment will be formed for, and affiliated to each pair of linked cavalry regiments, making in all fourteen reserve regiments; these will take over immature and unfit serving soldiers, recruits and surplus reservists, they will train the whole of the personnel not immediately required by, and supply draughts to the mobilized regiments.

Peace Establishment. (Cavalry Regiment).

	Household Cavalry	CAVALRY OF THE I		E LINE.
	4 Squadrons	3 Service Squadrons at Home	India	Egypt and S. Africa
Officers	24	23	27	23
Warrant Officers	2	2	2	2
Sergeants Trumpeters and	55	44	53	47
Drummers	8	6	9	7
Rank and File	343	621	533	513
Total	432	696	624	592
Horses	276	523	561	478

War Establishment—Cavalry Regiments are organized into Headquarters, three Squadrons and a Machine Gun Section with two guns. Regiments in India have a reserve troop.

The squadron is the tactical unit of cavalry on war establishment. These are divided into four troops each under a subaltern; the troop is again divided into four sections consisting of four front rank men and their coverers. The establishment consists of:

## Regimental Headquarters.

#### OFFICERS.

Horses	Horses
Lt. Colonel 3	Warrant Officer
Major 3	Sergeants 6 5
Adjutant	Artificers 43
Quartermaster	Rank and File
Medical Officer	
Veterinary Officer3	Total 3632

#### Machine Gun Section.

Horses	Horses
Subaltern	Privates1212
Sergeant	Drivers and Batmen 1016
Corporal	Total 25 33

## Each of 3 squadrons.

#### OFFICERS

Horses	Horses
Major 3	Trumpeters
Captain	Corporals
Subalterns	Privates108110
Sergeants	Drivers and Batman 21 18
Artificers 88	Total squadron164175

## Recapitulation.

	Headquarters	Machine Gun Section	Three Squadrons
Officers	6	I	18
Warrant Officers	I		
Sergeants	6	I	30
Artificers	4		2.4
Trumpeters			6
Rank and File	19	23	414
Total	36	25	492
Horses	32	33	525

At Headquarters the establishment includes one Medical Officer, one Veterinary Officer, one Armorer, fifteen A. S. C. Drivers, second line, and three R. A. M. C. personnel. In addition there are left at the base one orderly room sergeant, one sergeant master tailor, three storemen, and for the first reinforcement one subaltern, two sergeants, forty-four rank and file, with forty-eight horses.

#### THE CAVALRY OF THE BRITISH ARMY. 1131

Transport—Consisting of twenty-seven vehicles as follows:

#### HEADQUARTERS.

Bicycles2	Wagon, G. S. Store
Cart, Medical	Page sping Voter Facint
Cart, Water	rack animai, vety. Equipt

#### MACHINE GUN SECTION.

Wagons, for machine guns, etc.....4

#### SQUADRONS (3)

Wagons, S. A. A. (1 per Suad-	Wagons, Baggage6
Wagons, Tools, etc. ( 1 per	Bicycles6
Squadron)3	Pack Animals for Scouts6

Four men in each squadron are trained in first aid, and one N. C. O. and four privates in pioneer duties. In each regiment one N. C. O. and eight men receive instruction in sanitary duties, also the following minimum number of scouts are maintained:

I Officer, Scout leader 8 Regimental, 1st class scouts
I Sergeant Scout 16 Squadron, 2nd class scouts

In addition there should be at least four trained dispatch riders in each squadron.

Arms—The Cavalry arm is the short magazine Lee Enfield Rifle. The machine gun section is armed with two .303-inch Maxim Machine Guns with tripod mountings carried in two limbered G. S. wagons. All ranks except drivers carry the sword and scabbard.

Ammunition—The following table gives the approximate amount of ammunition available per arm, and how carried:

How Carried		Number of Rounds per Gun			
TION CARRIED	Rifle	Pistol	Machine Gun		
On soldier, or with gun	100	12	3,500		
In Regimental Reserve	100	12	16,000		
With Brigade Ammunition Column	100	12	16,000		
With Divisional Ammunition Column	100		10,000		

Tools—A cavalry regiment carries the following tools:

Axes, felling21	Crowbars 3
Axes, hand 7	Bill hooks22
Axes, pick22	Reaping hooks
Mauls, C. S	Folding saws 3
Shovels	Hand saws 3

Duties—The cavalry with an army in the field is divided according to the nature of the duties required of it into:

- 1. Independent, or strategical cavalry, for strategical exploration under the instructions of the Commander-in-Chief.
- 2. Protective cavalry for the provision of the first line of security, under the direct orders of the commander of the force they are protecting.
- 3. Divisional Cavalry, forming part of a division of all arms; for scouting in connection with the infantry, advanced, rear or flank guards or outposts; or for intercommunication purposes.

Independent Cavalry—The independent cavalry is indepenent only in the sense that it is at the immediate disposal of the Commander-in-Chief, and is not charged with the direct protection of any slower moving body of troops. It co-operates with other troops in giving effect to the will of the Commander-in-Chief as much as any other formation. To obtain accurate information as to the dispositions and strength of the hostile army is the initial duty of the independent cavalry.

Protective Cavalry—The duty of covering the main coltumns is normally entrusted to the protective cavalry, which thus furnishes the first line of protection, and is usually accompanied by mounted infantry and horse artillery.

Divisional Cavalry—Divisional cavalry assists the infantry in the immediate protection of the division by supplying mounted men for patrolling in connection with the advanced, flank and rear guards and outposts; maintains connection with the protective cavalry and furnishes escorts, orderlies and dispatch riders for the purpose of inter-communication generally.

Shocing—The kind of shoe used in all branches of the scrvice, unless otherwise ordered, is the "concave" shoe with

six to eight nail holes, according to the size and weight of the shoe. One-half of the shoes and nails are supplied ready made, a proportion of which are fitted cold; the object in view being to maintain the practice of shoeing exactly as it would have to be performed in the field. The remaining half of the shoes are made up from old ones in order to instruct and keep the shoers in practice.

Care of Horses—The Commanding officer of a unit is responsible for the condition of his horses, their health, shoeing and general fitness for work on service; and for the fitting of their saddlery. He inspects all horses once a week with stripped saddles.

The care of horses in war and the veterinary services generally are under the Director of Veterinary Services responsible to the Quartermaster General, and having under him adminis-

trative and other veterinary officers.

Each cavalry man is taught to look upon his horse as part of himself, to take a pride in its appearance, and learn to rely upon it as his most effective weapon. Recuruits receive careful instruction in the horse's minor ailments, their prevention and cure, also its feeding and watering to ensure keeping his horse effective under all circumstances on service.

Riding Schools—Riding schools are maintained for the early training of horses and men because the horses are under better control, and the nervousness usually felt by recruits is greatly lessened. It is also a protection against bad weather.

Officers' Chargers—Two chargers are supplied at the public expense to each officer (except Quartermasters and Riding Masters) serving in a regiment of cavalry of the line; when these cease to be serviceable for military purposes they are replaced at the public expense. The chargers are supplied for military purposes, but any horse so supplied may be used for general purposes on payment of £10 (\$48.70) per annum, in which case the horse becomes the property of the hirer after six consecutive annual payments by an officer at home, and after four such payments abroad.

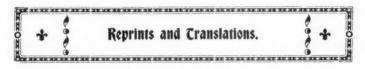
An officer serving with an army in the field will be provided at the public expense with the full number of chargers

authorized for his rank or appointment. The private chargers of officers proceeding on active service, within the number they are required to maintain, may, if required and found suitable, be taken over by the Remount Department at prices fixed with the owners.

Swimming—Swimming is taught at all stations where facilities exist. During the proper season bathing parades are formed at the discretion of the commanding officer for the purpose of instruction, the skilled swimmers being distributed so as to teach the rest. For crossing rivers it is preferred to use small rafts or boats to carry the kit, saddlery and men, and to make the horses swim; or the men swimming with their horses. Scouts' horses are taught to cross a river with saddles and equipment on, the rider carrying his cartridges as much out of the water as possible.

Scouts—Cavalrymen are trained to reconnoiter, and those who show special ability are further trained to become scouts or dispatch riders.

Marching—Marching an average of twenty to twenty-five miles a day is in practice a very considerable performance, and much more cannot be demanded for any length of time without considerable casualties resulting; although forced marches of from forty to fifty miles may be made by careful attention without serious detriment to the efficiency of horses and men.



#### FIGHTING ON FOOT BY CAVALRY.\*

By LIEUTENANT COLONEL ALFONSO PRADILIO.

(For the Revista del Arma.)

Cavalry, which cannot fight as well on foot as on horseback is a retrograde cavalry, outside of its mission and fatally exposed to reverses.

ENTERTAINING the firm conviction that fighting on foot opens up an unlimited horizon for Cavalry Tactics, though the study of history proves that the theme to which I allude is but a logical continuation and progressive perfection of what has been done in all ages, since fighting on foot by cavalry goes back nearly twenty centuries, I begin by recapitulating opinions of noted authorities.

French theory. Fighting on foot is not, nor can it be, more than an incident. It should figure only exceptionally. By reasoning otherwise the ideas of cavalry are discredited and its impetus would be paralyzed. Colonel T. Bonie, Major of the 11th Hussars, says: "To those who think that fighting on foot should be but an incident or an exception I will simply reply by the announcement which the new foreign regulations prescribe on the manner of sustaining the struggle under various circumstances.

Prussian theory. Fighting on foot enables cavalry to undertake distant expeditions. The cavalry soldier should not fear the fight on foot which, once begun, should be pursued with vigor.

<sup>\*</sup>Translated from Revista de Caballeria, Mexico, of April, 1910, by Colonel Charles Williams, 21st Infantry, for the War College Division of the General Staff, U. S. Army.

He will not be at the height of his mission or of modern exigencies if he does not know how to fight as well on foot as on horseback.

The cavalry soldier should be able, on foot to force a defile in the same manner as he would delay the march of an enemy, obliging him to make a detour which would cause a loss of time. It is necessary that he be able to overthrow or defend a position, whatever it may be, and maintain it until the arrival of his own infantry. In a retreat he can, by fighting on foot, detain the enemy, force him to deploy and thereby cause him to lose time. Cavalry will also be able to support itself in this way when retreating by a defile, when guarding its cantonments, etc., etc.

English theory. Now that the cavalry is armed with breech loading carbines capable of maintaining rapid and effective fire, service on foot assumes great importance and should be practiced frequently. Cavalry soldiers who can march rapidly on foot and put themselves and their horses under cover can be very useful as cavalry under many circumstances; in case, for instance, of a close country in which it is difficult to attack on horseback.

The most favorable conditions for fighting on foot are the following:

- 1. When in an open, undulating country favorable for rapid movement it is possible for cavalry to secure shelter and from there annoy cavalry or artillery reserve.
- 2. When an advance or rear guard can avail itself of terrain or obstacles, such as a bridge, a ford, a defile, and from there hold cavalry or artillery in check and prevent the taking of these places except with danger of loss of time.
- 3. When cavalry, following a road or crossing close country, finds itself meanaced by attack or exposed to fire from long range; or indeed, when it may be possible to take advantage of a pit or embankment in order to direct a flank fire on the hostile lines.
- 4. In isolated houses or buildings, or when a body inferior in numbers may, without fear of being surrounded, hold cavalry in check.

5. When patrols or pillaging parties are met, etc., etc.

The Italian, American and Russian theories are even more explicit than the preceding. In presence of all of these foreign regulations holding the same opinion and inspired by such great initiative, we must not remain indifferent.

From this time cavalry must understand how to fight on foot under various circumstances. This is no exception; it is a fact observable daily in all of the minor operations of war; it is not an incident, it is a constant menace, an obstacle which may suddenly arise and which it is necessary to promptly arrest under penalty of being annihilated.

Foreign powers apply it on a great scale, drilling their soldiers on foot in the minor operations, in attack or defense of woods, towns, etc. They prescribe fighting on foot not with reduced numbers but generally with at least a squadron or more, and even with entire regiments. Therefore, since they will appear with a great force trained to fight on foot it is indisputable that we must go ahead in order to be in training for the struggle, and also give this double instruction.

Far from lessening the confidence of the rider in his horse we must increase it to its utmost limits; it is easy to do so.

Formerly before being armed with a serviceable carbine, the rider was exposed while advancing at a distance, to being stopped by a body on foot. Instinct led him then to whirl the head to the rear to see whether friendly infantry was coming to his support.

Now he can launch out on distant expeditions, because he is sufficient in himself and is prepared to occupy more remote points until the infantry replaces him.

Formerly the capability of the rider was simple because he depended on but one element—the horse; now it is doubled because he has reinforced himself with an important factor—fire.

Formerly the rider was not able to exact from his horse the full limit of his strength and means, because once dismounted he was without defense and exposed to capture by the enemy.

Now the detachment can be run till it falls exhausted, because the riders can get up and with their carbines go ahead and be invincible.

From today, great distances are his; limitless horizons, extreme rapidity, the most dashing career, depending on no one; he can undertake anything by this alternate use of horse and gun. Therefore we must not be negligent about giving our arm thoroughly this double instruction.

Napoleon, the most illustrious of our teachers, insists on this idea and in his memoirs, written with calmness, he often recommends frequent and brief exercises, fixing a good proportion to pursue.

Shall cavalry be the only arm not to accept, like others, evolution?

The influence produced on tactics by long range and rapid fire is not to be denied, giving to infantry and artillery an element of progress. Such denial would imply immobility; it would be as much as accepting your removal from the field, because the potency of the charge, which depends on the living force acquired at the moment of shock, tends to become weakened with the range of the arm. This would be to minimize the role of cavalry and to expose it continually (should new methods of destruction be discovered even more perfect) to hearing its *raison d'etre* discussed, or, at least, to see its prestige and importance reduced.

On the other hand, cavalry seeks energetic and intelligent advantage in his accurate arm, his mission grows, his confidence increases, the future seems bright because he loses the anxiety of isolation, because he will know, like infantry, how to take advantage of every improvement and will be able to pursue it step by step along the road of progress.

More than ever is co-operation of the three arms necessary in order to meet extreme emergencies; and without fire action cavalry will be unable to fulfill its future mission either before the combat or on the battle-field.

On beginning of war, whilst armies are being organized, the function of the cavalry consists in aiding the mobilization and protecting the abandoned territory between the frontier and the points of concentration—and this work extends over limitless space. It is essential that it be able to take care of itself; that it can take possession of important positions and hold them until arrival of the infantry. This mission can be

fulfilled by utilizing the cavalry for rapid movements to desired points but it can be perfect only by resort to fighting on foot.

During action on the battle-field cavalry will often be the only protection for artillery, because it is subjected to the destructive effects of the hostile artillery, it will have to be more mobile than in the past, be at great distances and not being able to be kept up with by infantry it must seek support from the cavalry; the maximum of resistance cannot then be reached except by combining mounted and dismounted fighting.

Modern war imposes on cavalry the absolute necessity of bringing all of its resources into play and of being able to command all of its strength by fighting on foot and horseback; it is indispensable that it seize every possible advantage by means of this dual instruction.

For one to be content without asking others for what they may be able to give us is a deliberate refusal to utilize all of our advantages—not to desire to obtain more than medium results. Do not tell us that fighting on foot tends to deprive cavalry of its native qualities, because such cannot be the case. The precious attributes of power and speed, of continuous charm, of daring and of equestrain exploits we wish to develop to the utmost, and exactly because we understand them in their highest sense, we do not desire that the dash of the cavalry be paralyzed by drilling it in fighting on foot: much to the contrary, it is to give the rider confidence and fearlessness to use the horse to its last breath, because there yet remains the firearm which makes him formidable. He will more than ever be able to get from his horse the power and speed which he possesses, the resources which constitute all the vital forces of cavalry.

Cavalry service by tradition, instinct and pleasure will always take the first place. Is it not the use of the horse to which we owe the sensations which hold such attraction for us? Not only is the horse our principal source of success, but he represents the seductive, brilliant, irresistible side of our calling. He is our luxury, our coquetry, our inseparable companion in war. To be on a horse springing into space, running great distances at full speed, to go flying to a point where we were

not expected and to place ourselves beyond the range of vision, is a charm which no other exercise can give us. The start of the animal, his powerful breathing, the sound of his hoofs beating the ground, the speed of the race course, the beating of the wind which lashes him in return, all these sensations stir the senses and produce a kind of lightness which intoxicates. The cavalry service represents what is seductive, knightly, legendary, poetic and irresistible; we will always be drawn to it like steel to the magnet.

On the other hand, foot service represents for the horseman the painful, serious and difficult side. Armed with his carbine he advances slowly under the cover of obstacles. One must be cool-headed in order to aim correctly, and then he fires at long distance without the thrill of battle.

On one side we have prestige, pleasure, attractiveness, all that appeals to the imagination; on the other only stern reality and arduous work. It is not to be feared that the second function may detract from the first; each of them retaining its well-defined attributes.

Without possible question, mounted service constitutes, and will always constitute, the important role of cavalry because without the horse it has no existence. This is essential to it and is to be insisted upon, because the cavalry can make from 80 to 100 kilometers a day.

More than ever we require operations at long distances, because present exigencies impose on us the necessity of being able to travel for many consecutive days 80 kilometers, more or less.

This expenditure of energy is within our means and must be urged by saying that the cavalry force is a gold mine which can, and should be, drawn on liberally in a campaign.

But when the horses are exhausted from fatigue or the terrain will not permit its employment, must cavalry be reduced to a state of impotency? This is unworthy of acceptance and we shall ever resent the pettiness of this argument which would lessen the importance of our mission.

Cavalry as we understand it is the arm which must constantly retain the fervor of movement, restive, unable to remain sedentary.

Not being able to fight mounted, let it seek the means of being useful on foot by using its firearms and thus bring into play all of its resources and be able to be in condition to meet the exigencies of modern warfare; and to this end it is indispensable that you retain to the last moment all of your resources and vigor: what are they? The development of the powers of your horse, united with the formidable support of your firearm—such is the double power which, more than ever, makes for cavalry the conquest of great space, opening up a fertile and limitless field of action in which its noblest qualities can be exhibited.

# NEAR AND BATTLE RECONNAISSANCE OF DIVISIONAL CAVALRY.\*

BY CAPTAIN NIEMANN, GENERAL STAFF, SEVENTH AUSTRIAN ARMY CORPS.

DEACE maneuvers furnish our cavalry with numerous opportunities to practice the near and battle reconnaissance of divisional cavalry. Considering the love the cavalry has for this service and our excellent material for patrol and message service, we might expect the best of results, which is, however, far from being the case. Complaints are continually heard that the patrols ride entirely contrary to actual war conditions, that their manner and method of gaining an insight into conditions is unmilitary, to say the least, and that the leader of troops is never supplied with sufficient reports and information. On the other hand, the cavalry commander maintains that he has sent out more than sufficient patrols for the purpose and that nothing but the rapid course of the peace maneuver is to blame for insufficiency of results of reconnaissance, and points to his frittered away squadrons and exhausted horses in support of his statement.

Upon careful examination of the complaints viewed from both sides we find the gist of the matter to be as follows:

<sup>\*</sup>Translated from Kavallerstische Monatschefte, November 1910, by Harry Bell, M. S. E., Army Service Schools.

The leaders of troops expect entirely too much from the cavalry performing the near and battle reconnaissance; unused to make their dispositions in the fog of war, they demand very early reports as to the hostile dispositions down to the very last details. To furnish this detailed information whole troops are split up into patrols which have to ride close to the enemy, entirely contrary to what they would do in actual war, and thus lose all connection with their units in rear. Being thus entirely without strong cavalry support and having no short, assured route to transmit messages, their reports reach the leader only after a long delay, if at all.

Our inquiry as to what we may justly expect from the near and battle reconnaissance and what methods will best lead to desired results, should be based on lessons taught by actual war. What has been and can be achieved in war we must require in our peace maneuvers; but nothing beyond that, for that would harm the training of men as well as spoil the leaders. The latter should not be accustomed to arrive at their decisions in peace maneuvers on any results of reconnaissance they would not have in war and we should demand nothing of the cavalry which it can not perform in actual war; but we should demand that what the cavalry can perform be performed just as would be the case in war.

There are many and divers conceptions of the meaning of near reconnaissance and battle reconnaissance. The near reconnaissance has always certain definite limits. It serves the purpose of securing for the leader of troops complete freedom for tactical decision and movements, and gets close to the enemy only when the latter has come so near that actual contact may ensue either during the succeeding night or next day. As soon as the near reconnaissance has gained touch with the enemy, the far reconnaissance ceases. In maneuvers on a smaller scale, where both parties are at the start separated by only twenty to thirty km. there can be no question of far reconnaissance and only near reconnaissance can be performed. But battle reconnaissance is one phase of near reconnaissance: it must be prepared by the latter and becomes effective at the moment when the opposing party proceeds to deploy from the march column.

In closer examination of the tasks set the near and battle reconnaissance of divisional cavalry and in discussing the best means of reconnaissance, we have to make a distinction between divisions operating independently and divisions operating as part of a larger force.

In the advance of a division acting alone, the divisional cavalry will almost always be under the orders of the advance guard commander. Its main task is to ascertain the approach of the enemy, as early as possible, by near reconnaissance and for this purpose a few patrols will suffice; these patrols to augument or relieve the organs of the far reconnaissance in touch with the enemy. It is the principal duty of patrols which encounter the enemy frontally, to correctly ascertain the frontal advance of the enemy in regard to time and place. In carrying out this task, they have to reckon with the hostile cavalry screen and must fall back from observation point to observation point along the route assigned them for reconnaissance. (To cite an example: A patrol receives the task to ascertain whether an enemy, who has today reached A, marches tomorrow via B to C. At daybreak the patrol would take position between A and B at such a point as to be able to overlook the road A-B as far as A, if possible. When it perceives the advance of stronger hostile forces from A on B, it would take up an observation position between B and C at a point giving a good view as far as B, etc.) As the two opposing parties get closer to each other the patrols are received by their own infantry battle reconnoitering units and may then serve these latter for the purpose of quickly transmitting reports to the rear.

Naturally, a part of the near reconnaissance patrols will encounter the flanks of the hostile advance. Such patrols frequently will have the opportunity to ascertain the strength and march order of the enemy; but this must not prevent them from carrying out their original task, the observation of a certain terrain sector or road. It will prove difficult for these patrols to send back reports as to the strength and march order of the enemy, for the messenger carrying that report will have to go a long way around the hostile cavalry security detachments and screen, and in most cases quite a fighting force may be neces-

sary to make sure that such important information, the enemy's strength and order of march, reaches its destination.

In the meantime the main body of the divisional cavalry advances by stages. It has the duty to gain certain sectors or vantage points which allows a distant view into the country ahead, to keep hostile cavalry away from such vantage points as will offer a view towards our own march column. For this duty the divisional cavalry must be of great fighting strength, and it can possess such fighting strength only when the strictest economy has been practiced in the matter of sending out patrols.

Artillery patrols can carry on their reconnaissance under protection of the advance cavalry. One of the main points in that is that the artillery officer *personally* sees everything. Only then will be able to point out to the artillery commander the different points in the terrain which come into question in the matter of hostile artillery positions and those which facilitate quick ranging.

As soon as the near reconnaissance is taken over by the infantry, it becomes the duty of the advance guard cavalry to continue observation on the flank. The commander of the troops should designate the flank on which reconnaissance appear to him to be most required and of most importance. On that flank the main body of the cavalry would take station, a small detachment under an officer being sufficient for the other flank. As a matter of fact, higher headquarters frequently neglect to orient the cavalry commander concerning his own intentions and the position of the leader. It is recommended that some staff officer be charged with keeping up communication between the cavalry and headquarters. This officer should at the same time take care that arriving messengers assemble at some convenient point and are sent back in squads to their organization from time to time.

When no longer reconnoitering in front, it becomes the duty of the cavalry to make every effort to gain such points on the flank as will assure a good view of the hostile deployment. This will never be an easy matter to accomplish if the opponent is active. Naturally, infantry patrols and detachments will be found on all points of vantage near the hostile flanks.

In going farther off on the flank, we will have to reckon with the hostile cavalry. Single patrols are of little use in such situations. Only when the advance guard cavalry has victoriously driven the hostile cavalry from the field of observation may results of reconnaissance be expected from patrols. The main information required is location of hostile wings and hostile depth formation, everything else is of secondary importance.

The artillery of both sides may be this time have opened fire; still, in formation of the hostile artillery may yet be welcome and of value. If an artillery patrol is in the field, the respective artillery officer will note the hostile artillery position on his map, wil make a mental notation of prominent points in the terrain and himself ride back to the artillery commander. Written notation of prominent points seen form the flank is of doubtful value; any prominent point seen from the flank is frequently invisible from the front or looks entirely different; only a comparison of both views leads to a clear understanding.

If no artillery patrol is in the field, the cavalry itself has to report what can be seen of the hostile artillery, without however going into minor details. If it succeeds in early ascertaining the grouping of the hostile artillery it has performed all that can be expected of it. Details, frequently demanded, such as location of limbers and ammunition wagons, whether field guns or howitzers, number of pieces, kind of fire, formation and gait in which change of position are executed, etc., are of minor importance to the commander of troops and to the artillery commander. In any case, such reports will be overtaken by events before they reach their destination. The artillery has to see itself and must direct its fire on those parts of the enemy which are susceptible to an effective fire. Any other procedure is wrong.

The main difficulty of reconnaissance does not lie in the composition of reports, but in creating the possibility of ascertaining extension and depth of the hostile deployment and transmitting that information to the leader with certainty and on the shortest road. Failure in this matter is frequently not to be blamed against the patrol commander but against the cavalry commander who sticks to the flank instead of utilizing his mobility and occupying important points of observation. In

place of keeping his fighting power together and using his force in the service of reconnaissance, he looks to his salvation by sending out a large number of patrols, which in many cases lose connection with the rear, have no knowledge of the course of the battle, carry on their observations entirely in an unmilitary manner and within the hostile security zone, and whose reports and messages may reach the commander too late and by a roundabout road.

Cavalry which, by using its full fighting power, has forcibly gained the hostile flank, can carry on a thorough battle reconnaissance to near the rear of the enemy with merely a few closely connected patrols. (In many cases a few galloping troopers will suffice to ascertain the presence or absence of the enemy at tactically important points in the terrain.) It can at all times furnish protected observation stations for artillery patrols and a point of concentration for its own patrols from which all reports will be sent to the commander of the troops on the shortest road. In a situation where the cavalry patrols do not have the support of a strong cavalry body in rear, reconnaissance from the flank, if at all practicable, will be performed with great difficulties.

Similar to the recontre engagement are conditions in an attack against an opponent in a defensive position. Here also the cavalry has to furnish opportunities for early reconnaissance to the artillery partols by forcing back the hostile reconnoitering units. After that has been done, the cavalry must try and gain the hostile flank designated in advance by the commander of the troops and create means there for observation. The ascertainment of the location of hostile wings and hostile reserve is most important. It will probably always be found impossible to ascertain artillery details, and in any case the artillery of the attacker does not need such information; it can wait until the infantry forces the defender to show his artillery.

No battle formation is so dependent on reconnaissance as is the defense, none needs screening so much. Therefore important points in the foreground which facilitate early frontal reconnaissance by the attacker are generally occupied by cyclist or infantry detachments, while the activity of the cavalry must in the very start be far in front of the flanks. The longer the

attacker is prevented from gaining an insight into the conditions prevailing within the defensive line, the better are the chances for the defender to carry the battle on as he desires. that is, forcing the ennemy to attack frontally. Thus it will be seen that reconnaissance by very strong cavalry in front of the flanks is of vital importance to the defense. Will the enemy attack frontally? Does he march off toward a flank? Where is he massing his forces for the attack? These are important questions the cavalry will have to answer; everything else is of secondary importance. In carrying out its duty, the cavalry of the defender should always remember that changes on a large scale in an attack once started are almost impossible of execution. If it has perceived that the attacker deploys and if it has ascertained the grouping of the hostile forces, it has fulfilled its main requirements; its subsequent duty consists in screening the flank of the defense in front. The most important point is to prevent the cavalry of the attacker from gaining points on the flanks of the defense, thereby creating an opportunity for the defender to launch a sudden counter attack.

The duties of the battle reconnaissance in attack and in defense cannot be solved by merely sending out a number of patrols, even if the message service is perfect, but only by having a very strong and well led body of cavalry in the field, which opens the roads for some single patrols (sent out charged with definite duties) and offers them the requisite support. If that system is adopted, the commanders will in good time learn what is tactically important and the information will reach them in a proper, regulation manner. If we demand more from our divisional cavalry, it will resort to actions contrary to rules in war; it will lose its sense of what is tactically important and practically attainable, and will fritter away valuable time.

In war the divisions will be as a general rule fight as part of a larger force and the divisional cavalry will be confined to certain limits in its near reconnaissance, and being confined to a narrow strip of terrain, it will have to content itself with more frontal reconnaissance. Observation from a flank will be possible in exceptional cases only, for the hostile columns marching up to battle are so close to each other that a patrol entering the

space between them will have but little chance of sending back any report, because the messenger carrying it may never be able to pierce the probably dense hostile screening lines. It is the duty of the far reconnaissance to ascertain the enemy's depth formation and it can observe the enemy as long as he marches on a broad front. Limited to a confined space, it is the duty of the divisional cavalry to take possession of and hold as long as possible the terrain so important for reconnaissance to the commander of these troops and to the artillery patrols and at the same time prevent the hostile cavalry from gaining an insight into our own advance and deployment.

There will seldom be room for the cavalry in the first line of a divsion engaged in battle as part of a larger force, and it is impossible for it to remain on the enemy's flank. Only at places where the battle reconnaissance has found gaps in the hostile fighting line will the divisional cavalry have to try and occupy observation points in front and to one side of our own infantry. But such cases will be the exception. In general it will be advisable to place the cavalry in readiness behind the front where crises may arise in the battle or where gaps in our line are to be filled up. Not much can be done by cavalry in the matter of battle reconnaissance in a battle.

Conditions are somewhat more favorable in those cases where the divisional cavalry is on the extreme wing of an army. There it will act as a sort of connecting link between the army and the independent cavalry on that wing. As soon as the latter has succeeded in driving the hostile cavalry from the field, as soon as it starts to attack the hostile wing, the divisional cavalry must hold the terrain on that wing of the hostile battle line and defeat any and all attempts of the enemy to reconnoiter the terrain between the independent cavalry and the army in battle. If it succeeds in this and if it further succeeds in reconnoitering conditions on that hostile battle wing and keeping up connection with the independent cavalry, it has performed all that can reasonably be expected of it.

Thus we see that actual events in war set definite tasks to the near and battle reconnaissance of divisional cavalry as well as limitations which cannot be exceeded by it. In all phases of the war, divisional cavalry has more important tasks than concerning itself with reconnoitering details. If we demand reports of minor details of the divisional cavalry in peace maneuvers, it will undoubtedly furnish them, but at the cost of its training for war.

Our cavalry is not lacking in technical ability to observe and to compose proper reports, but is lacking in proper war methods of reconnaissance, which correctly judge and consider the hostile counter effect. There is an absence of tactical understanding and practical training so necessary for correctly performing the near and battle reconnaissance in actual war. by correctly performing we mean the act of strong bodies of cavalry taking early possession of that part of the terrain in front and on the flank of the enemy which offers good view into hostile dispositions; that these strong bodies of cavalry work with only a few patrols sent out to clearly defined localities, furnish them the necessary support in rear and assure to them a certain, short route to send back their messages and reports. There is also an absence of correctly estimating the importance of screening duty under any and all conditions, which duty consists in keeping away the hostile reconnoitering organs from all favorable observation points in our front and flanks.

The artillery commander is responsible for the artillery reconnaissance: it is carried out by artillery partols, not by cavalry partols. It is merely the duty of the divisional cavalry to enable the artillery patrols to timely and efficiently observe things. Care should be taken in peace maneuvers not to require too many details; they cannot be reconnoitered in actual war and in any case good artillery needs no messages concerning details. It has been variously recommended to utilize the terrain maneuvers of artillery for training our cavalry, but we do not approve of that. Even if in those maneuvers the other arms and their positions are indicated by flags, these maneuvers will only conduce to give the cavalry erroneous ideas. There is, above all, an absence of just what causes difficulty to the cavalry in war, the hostile counter effect, the hostile screen in front and flank. To properly perceive artillery details in actual war is possible only in exceptional cases and, unless seen by an artilleryman, of doubtful tactical value. A special training of cavalry in this direction seems unnecessary.

To conclude, we will answer an objection which undoubtedly will be raised by readers against our method of reconnaissance. This objection may be that our method would mean that an entire squadron or regiment would ride as a patrol. Such a procedure is not meant at all. We again emphasize that the closed up bodies of cavalry mainly gain and hold points of support for the reconnaissance and see that assured and short connection is maintained between these points and general headquarters. The activity of the patrols is to be based on these supporting points. Only in such a manner can we count on an assured, quick message service; only thus can we avoid sending a series of patrols on the same errand into the same direction; and only thus will we be able to avoid the evil of having out patrols who have no point of support, who materially lessen the fighting power in the hands of the cavalry commander and who inordinately and unnecessarily exhaust the physical power of the horses.

#### INTERNATIONAL HORSESHOW.\*

(Under the patronage of the King of Italy, April 28th to May 25th, 1911.)

INTERNATIONAL CHAMPIONSHIP FOR CHARGERS.

## First Day.

MARCH of fifty kilometers to be accomplished within three and one-half hours (about thirty miles at eight and one-half miles per hour). The Association reserves the right to increase or diminish the length of the course by a few kilometers, but maintaining the regulation speed of fourteen kilometers and 280 meters per hour. A greater speed will not be considered. On the contrary, competitors who have taken more time will be penalized by a point for each minute late. The course will be partly on the road, partly across country with natural obstacles, and it will be indicated to the competitors one day in advance. The start will take place individually or by groups, according to the number of competitors.

<sup>\*</sup>Translated by Major H. T. Allen, General Staff, U. S. Army.

### Second Day.

The course will be about 3,000 meters (about one mile and seven furlongs) with twenty-two obstacles, solid and half solid. The maximum time allowed will be six minutes (a gait of about three minutes and twenty seconds). No credit will be given for a shorter time, but a greater time will be penalized by one point for each two seconds over. Knocking down a part of an obstacle will be penalized by two points, as will be a refusal or a cutting. The fall of the horse or the rider will be penalized three points.

## Third Day.

Each competitor will follow a course marked by flags, part on the road and part across country, a distance of about 25 kilometers (about fifteen miles) with various obstacles (obstacles de campagne). The maximum time of two and one-half hours will be allowed (a gait of six miles per hour). The competitors will leave in the order that will be established later and will receive at the moment of departure a plan of the course. The arrival will be at the Hippodrome of Tor di Quinto.

Only the thirty most successful competitors of the two preceding days will be permitted to compete. In case one or more competitors have an equal number of points of the thirty class they will be permitted also to enter. The total number of points given to the first one to finish will correspond with the number of competitors. The second will have one point less and so on to the last, who will have only one point. If two or more competitors finish in the same time they will get the same number of points. Each competitor will have the difference between the total figure and the number of the rider who precedes him.

# Final Classification.

One hundred points will be given to each competitor. From these 100 points will be taken the total number of points that he has been penalized. The final classification will be determined as follows: After having deducted from each competitor the points lost in the first two trials and added those won in the third the greatest number of points will be taken as the base.

The prize for this championship will be 35,000 francs, divided into five prizes.

## Eligibility.

Officers of the Italian Army and those of foreign armies in active service mounted on horses belonging to them and used as their chargers or on regimental horses. The first test will be in campaign uniform and the two others in dress uniform without sabers.

Military International Cup Presented by the King of Italy.

The cup will be competed for by teams of six officers from each nation. Teams will be arranged in alphabetical order, Italian last. The officers of each team will be numbered from 1 to 6, according to their registering, and will appear in that order. Numbers 1 of each team will be called first, then the numbers 2, and so on. The course of 3,000 meters must be run within seven minutes. It will comprise fifteen obstacles without wings, with a front of at least three meters and an initial height not exceeding 1.15 meters. Each officer wil take the course separately, the total number of points obtained by the six riders composing the team will constitute the number of points for that team; however, in order that any team be classed first, it must have at least ten points more than the second. In case this does not occur between the two first teams, they will go over the course with the obstacles made higher until one team shall have acquired the difference of ten points required. Each refusal or cutting will be penalized two points, as well as the total or partial knocking over of the obstacles. The fall of a horse or rider will be penalized three points. If, for instance, a rider does not finish the course, he will be penalized (in addition to the points that he will have lost in the part of the course already covered) as many times two points as there are obstacles not taken. The victorious team will secure the cup of his Majesty.

# Class for Hunters.

For horses having hunted regularly in Italy or abroad during the season of 1910-11, ridden by gentlemen who are reg-

ular members of a hunt, or by officers authorized to hunt in a hunt club.

First Trial—The competitors should cover in one morning the distance of about ten kilometers across country, over fixed natural obstacles not surpassing 1.30 meters high in the maximum time of forty-five minutes. Horses which do not take the prescribed obstacles or which do not arrive in the fixed time will be dropped.

Second Trial—A course of about 3,000 meters with fixed and half fixed obstacles maximum height of 1.30 meters, maximum time six minutes and forty-five seconds. Horses which do not finish in the prescribed time will be dropped.

The following are the penalties: For each refusal or cutting, 1 point. Knocking off the mobile part of the obstacle with feet, 1 point; knocking off the mobile part of the obstacle with front feet, 2 points; falling of horse or rider, 3 points. In case of a tie, the obstacles will be increased according to the wishes of the jury. Prizes to consist of 10,000 francs, divided into seven parts.

In this class entries should be accompanied by the certificate of a Master of Hounds, saying that the horse has hunted in the season of 1910-11, and that the riders are regular members of the club, or that they are officers who are entitled to hunt with that club.

The hunt club will include fox, stag and boar hunts. Paper hunts and drags will not be included.

### Gentlemen Riders-Class A.

For horses of all breeds and of all countries, ridden by gentlemen. The course about 3,000 meters with mobile obstacles, in height 1.20 meters; maximum time, 6 minutes, 30 seconds. Horses which do not finish the course will be dropped.

The following are the penalties: Refusal or cutting, 1 point; knocking off the top of the obstacle with hind feet, 1 point; knocking off the top of the obstacle with front feet, 2 points; falling of the horse or rider, 3 points. In case of a tie, the course to be ridden over with higher jumps, as the jury may direct. The prize: 4.000 francs, divided into six parts,

#### Gentlemen Riders-Class B.

For horses of all breeds and of all countries, ridden by gentlemen and officers. Distance about 3,000 meters, over solid and half solid obstacles. Minimum height, 1.20 meters, and maximum height, 1.40 meters. Maximum time permitted, seven minutes. Only those horses finishing in the required time will be considered. The following are penalties:

Each refusal or cutting, and striking the		
article with the hind feet	1	point
Striking the article with the front feet	2	points
Fall of the rider or horse	1	point

In case there is a tie, the prize will be given to the horse completing in the shortest time. The purse will consist of 5,000 francs, divided into six prizes.

## Teams of Four for Officers and Gentlemen.

For horses of all breeds and all countries ridden by gentlemen, the teams to be formed at the time of registration. Distance about 2,500 meters; fixed and mobile obstacles, not passing 1.20 meters in height. Maximum time allowed will be six minutes. The penalties for each four will be as follows:

For each refusal or cutting, for each horse	1	point
Hitting the obstacle by one or more horses		
of the four	2	points
Fall of the horse or rider	3	points

In case of a tie between two or more of the teams, the course will be run over, and the obstacle increased in size, if the jury deems necessary. Teams requiring more than six minutes to complete the course will be excluded from classification.

## Training of Horses.

Reserve for Foreign Officers—This is explained in detail in the catalogue, and plates are given to illustrate the requirements.

## High Jump for Officers and Gentlemen.

For horses of all breeds and countries, ridden by gentlemen. Course will be over four obstacles of an initial height of 1.30 meters, placed in right line, with distance of fifty meters. The obstacles will be hedge, fence, wall and triple fence. Competitors must keep up the gallop between the obstacles. One cutting will be admitted without a penalty. For the classification, three points will be given to each horse that clears each obstacle clean, two points to the one that hits only with the hind feet, and one point to the one that hits with its front feet. Fall of the horse or rider will be penalized by three points. In case of a tie, the obstacle will be elevated to the degree decided upon by the jury. The purse shall be 5,000 francs, divided into six prizes.

# Champion High Jump (American Gate) for Officers and Gentlemen.

For horses of all breeds and countries, ridden by gentlemen.

The gate will have an initial height of 1.50 meters. The horse that clears clean will receive three points, the one that touches with his hind feet, 2 points, and the one that touches with his front feet, 1 point. Six faults will be admitted in this trial. The knocking off of a part of the obstacle, refusal and cutting, and falls will be counted as faults. The jury will decide upon how the increase of height will take place. The purse shall be 4,000 francs, divided into five prizes.

#### Ladies' Class.

For horses which are regularly hunted in Italy or abroad during the season 1910-11, and ridden by ladies who have hunted during that season and are regularly inscribed as members of a hunting club. In this test, all horses will be shown successively at a walk, trot and gallop, will take mobile obstacles not exceeding the 1.10 height and 2.50 in breadth which may be required by the association. In giving the prizes, the jury will take into account the regularity of the gaits and the total of qualities required by hunter trained for lady. Prizes will be objects of art.

Consolation Prize for Officers and Gentlemen.

For horses of all breeds and countries, which ridden by gentlemen have not obtained prizes in the preceding trials. The course will be about 3,000 meters, with obstacles not exceeding 1.20 meters in height; maximum time permitted will be seven minutes. Only those horses finishing in this time will be considered. The following will be the penalties:

Each refusal or cutting	1	point
Knocking off of the mobile part of the obstacle with the hind feet	2	points
Knocking off of the mobile part of the ob-		
stacle with the front feet	2	points
Fall of the rider or horse	3	points

In case of a tie, the course will be ridden again, with the larger obstacles as may be determined by the jury. Purse, 5,000 francs, divided into seven prizes.

### Grand International Military Steeplechase.

Sunday, May 14, Steeplechase. Officers in active service, belonging to the Italian army and to foreign armies; 10,000 francs given by the Association, 2,000 of which will go to the second, 1,500 to the third and 500 to the fourth. The horses must be four years old and over and may be of any breed and any country, but they must be qualified hunters and registered on service rolls for a period of two months. Entries 200 francs, forfeit 100 francs if he is declared Friday, the 12th of May, before 3 o'clock at Rome, and 25 francs only if he is declared Friday, the 28th of April, before 3 o'clock at Rome. Weight: I-vear-old can carry 68 kilograms; 5-vear-old, 73 kilograms; 5 years and more, 751/2 kilograms. Horses winning a steeplechase in Italy of 3,000 francs or a steeplechase of 10,000 francs in 1910 will carry 2 kilograms extra; horses winning abroad a steeplechase of 2,000 francs, or a steeplechase of 10,000 francs in 1910 will carry 4 kilograms extra; horses winning in Italy two steeplechases of 3,000 francs, or a steeplechase of 20,000 francs in 1910 will carry 4 kilograms extra; horses winning over two steeplechases of 3,000 francs, or a steeplechase of 20,000 francs in 1910, will carry 6 kilograms extra. Horses

of all countries trained in Italy from the 1st of February, 1911, will receive three kilograms. These horses will receive besides two kilograms off after the 1st of February, 1911, if they have not won a steeplechase of 2,000 francs. The distance will be about 4,000 meters. Entries will be made up to the 7th of April, before 3 o'clock, at Rome, to the Secretary of the Association. Horses belonging to foreign officers which have taken patr in this race and have not won 100 francs during the meet will receive 500 francs as a gratuity for traveling expenses.

## Farnese International Military Steeplechase.

For officers belonging to the Italian army and to foreign armies. The purse will be 4,000 francs, of which 500 will go to the second, 350 to the third and 150 to the fourth. The race will be open to qualified hunters of over 4 years of age, of all breeds and all countries, but they must have been Government horses for a period of two months and have not won in the year a steeplechase of 5,000 francs. Entrance 75 francs, forfeit 25 francs if he is declared the 23d of May before 3 o'clock at Rome. Distance about 4,000 meters. Entry should be made by the 12th of May at Rome to the Secretary of the Association. The weight will be published the 16th of May at 8 o'clock in the morning at Rome. Horses winning a prize after publication of the weight will carry two kilograms extra. Those winning two prizes or a handicap after that date,  $2\frac{1}{2}$  kilograms.

# General Information.

Foreign officers sent by their governments will enjoy special advantages. They will have free entry to the frontier at Rome and will be quartered in the capital during the meet. Their horses will be transported free from the frontier at Rome, where they will be sheltered and fed during the entire course of the meet. All trials except those of patrols will be international. Uniform will be obligatory for officers, and hunting costume for gentlemen.

Gentlemen will be qualified in accordance with the conditions prescribed by the Regulations of the Jockey Club and the Steeplechase Society of Italy. The Association will be

charged with the regulation of disagreements which may arise during the meet, and its decision will be without appeal. Entries should be made to the Executive Committee in writing, always accompanied by the entrance fee, which is 20 francs for each horse, whatever be its class. For the charge of championship and the cup of the team of Italy, entries will be closed the 20th of April. For the other classes, entries will be closed May 1st, for the teams of four and for the Consolation class, the evening before the test. The races are governed by the Regulations of the Steeplechase Society of Italy.

# THE BROOD MARE A FACTOR IN THE FRENCH REMOUNT SYSTEM.\*

UNDER the French Remount system, the breeder of a three year old saddle mare which he has sold to the government may retain the animal in his custody for two breeding seasons, under the express condition that the mare will be served by a government registered saddle stallion. Four year old mares may be retained for only one breeding season.

Following is a translation of the most important clauses of the contract between the Remount Department and the breeder:

Three year old saddle mares suitable for breeding purposes will be purchased by the Remount Department and temporarily placed in the custody of the breeders who have sold them and who will contract to have them served for two consecutive seasons, at three and four years of age, by a registered government stallion, such stallion to be designated in the foregoing contract by the military authorities.

The breeder binds himself to feed these animals, to keep them in good condition and to use them only for light work (such heavy work as ploughing, hauling dirt, sand, building materials, drawing heavily laden coaches and wagons is strictly forbidden). He further takes unto himself the expenses of all

<sup>\*</sup>Translated from the French by M. F. De Barneville.

kinds incident to the general care and the shoeing of the mares, as also the purchase of medical supplies in case of sickness.

Unless ownership of the mare be relinquished by the government to the breeder, for such reasons as will be set forth later, the latter can in no case claim ownership of them; but the foals born of these mares will be his property and he may dispose of them as he sees fit.

In case of a change of residence, the breeder entrusted with the care of an army mare is required to give due notification of same to the officer in charge of the Remount Station, through the commandant of the local *gendarmerie*. Failure to comply with this clause may occasion the withdrawal of the mare from his custody, should the War Department so decide.

The mares are placed under the supervision of the military authorities who may at any time exercise their right of control through such means as may be deemed advisable.

Besides this right of control and while in the custody of a breeder the mares are liable to inspections by the remount purchasing board. These inspections occur after July 1st of the second year after they have been placed in custody in order that they may be presented, as the case may be, with their first foal.

To this effect, the board, while touring the territory, summons the breeder, custodian of a mare, to present his charge for inspection at one of its meetings. After inspection, the board decides whether the breeder is entitled to a premium as a reward for the mare's good condition and the care which has been bestowed upon it, or, should the reverse be the case, the board will take such steps as the circumstances may warrant.

In reporting to the board, the breeder will present the foregoing contract and the certificate of service of the mare by a government stallion.

If, for no valid reason, a breeder fails to report to the board, he loses thereby all right to the premium. In this case, the officer in charge of the remount depot, who is also president of the board, summons him to present the mare, with the least practicable delay, either at the remount station or at a subsequent meeting of the board, and invites him to make

known the reason why the mare had not been presented at the first summons.

If the breeder pays no heed to the second summons, the officer in charge of the depot orders the withdrawal of the mare from his custody, unless its ownership be relinquished altogether by the government, as will be explained further.

The mares are turned over by the breeders to the military authorities to be assigned to a regiment before December 31st of the year preceding that when they will have reached the age of six.

However, the military authorities have the absolute right of withdrawing the mares before that period, at any time and without warning, either to meet the demands of the army, or as a result of ill-treatment and lack of care on the part of the breeder-custodian, or for any other reason.

The withdrawal by the government of a brood mare for failure of its custodian to present it for inspection, or for lack of care and ill-treatment reported at other times than during the inspection by the board, will impose upon the custodian the obligation of taking the mare at his own expense to the Remount Station.

On the other hand, the custodian of a brood mare may, after the first foal has been weaned, or after October 1st of the year when the mare has reached the age of four, relinquish voluntarily the custody of the animal. In this case the custodian will, at his own expense, bring the mare to the Remount Station.

In case of sickness of, or serious accident to the mare, the custodian will notify the officer in charge of the Remount Station.

Should the sickness or accident result in death or in a considerable depreciation in the value of the animal, a thorough investigation will be made by the commandant of the local gendarmerie as to the causes of the sickness or accident. This investigation should clearly establish whether the mare has been placed in proper time under the care of a veterinarian or if the necessary medicaments have been administered.

This investigation is in order to determine whether or not the custodian is responsible for the causes leading to the death of the mare and has taken proper measures to prevent it. If the death is found to be a result of his carelessness or neglect, he is ordered to reimburse to the government the amount of the purchase price and of any premiums he may have received. Should he be found not responsible, the carcass of the animal is left to him in payment of the sum of 15 francs (\$3.00).

In order to encourage the custodians of brood mares to give all the care and attention necessary to keep in good condition any animals that may be entrusted to them, cash premiums may be awarded in recognition thereof for any mare kept in excellent shape.

In estimating the value of these prizes, the board will compute the amount in proportion to the increase in value of the mare since purchased and judged from its present condition. This amount cannot exceed 250 francs (\$50.00) the first year and 450 francs (\$90.00) the second year. These maxima shall be reduced to 150 francs (\$30.00) if the mare has remained unimpregnated.

Should the case happen, that, through lack of care, through negligence, abusive treatment or any other cause engaging the responsibility of the custodian, the original value of the mare has been depreciated, the board will estimate and decide upon the amount of the depreciation which should be charged up against the custodian, such sum to be paid by him to the government district treasurer.

If the board finds that the mare has become unfit for service in the army as a result of ill-treatment, it decides that the animal shall be relinquished to the breeder-custodian who shall refund to the government the amount of the purchase price as well as any premium which he may have received.

The findings of the board are without appeal.

#### BLOODED HORSES FOR THE CAVALRY.

THE following clipping from a New York paper has been sent us with a note that it should be of interest to all cavalrymen:

On February 15th, at New York, sportsmen from the North, South, East and West sat down to table at the Waldorf-Astoria at the first dinner of its kind in this country. Called in the interests of sport in general, there were more than 300 present, among them financial and social leaders in New York, Boston, Philadelphia, Cleveland and other cities.

August Belmont, chairman of the Jockey Club, which controls racing throughout the country, presided. Among others present were Hollis Rinehart, of Washington, D. C.; Dr. C. C. Burton and William H. T. Huhn, of Philadelphia; James W. Graves, of Richmond, Va.; Andrew Freedman and Charles K. Harrison, Jr., of Baltimore; Robert Glendenning, of Philadelphia; Thomas F. Ryan, of New York and Richmond, and Reginald Vanderbilt.

Henry W. Smith, a gentleman steeplechase rider and allaround sportsman, in introducing Mr. Belmont as toastmaster, said:

"This is not a dinner of racing men, polo men, or hunting men, but of sportsmen, in the broadest distinction. As Lord North truthfully said: 'There is a vast difference between a sportsman and a sporting man.' I know that every gentleman interested in the future of sport feels that the Jockey Club and its chairman have done their best to uphold clean sport under the laws of the state of New York.

"No matter how successful a country, a race of men, or a breed of animals is, there is always the necessity of infusing new blood, and for that reason I felt sure that the mingling of gentlemen from all parts of the United States with those here in Manhattan would bring most valuable results."

The responsibility for sport in America, Mr. Smith de-

clared, rested upon the shoulders of the true sportsmen. He thought that all ought to work together, and suggested that the work could be done much better if all worked from a central meeting place.

August Belmont, on being introduced, said with emphasis that the banquet had not the remotest connection with any movement looking toward legal relief for horse racing or appeals to the lawmakers for enabling legislation. Later he announced that he would offer to the government six stallions to start a national breeding bureau, following the lines of France, Germany, Canada and other countries. Included in his six are Henry of Navarre, which once brought \$30,000 at auction, and Octagon, the sire of Beldame, winner of a Suburban handicap, one of the greatest horses ever bred in any country.

Continuing, Mr. Belmont said: "Convinced as we are that our cause is a common one, we are gathered here tonight, as I interpret it, to promote, by means of friendly intercourse, every healthy, clean and invigorating sport where the horse plays a part. Every other nation of the first class encourages the development of the thoroughbred.

"The great nations of Europe and their governments foster the racing and breeding of thoroughbreds for the value they know they possess. That racing furnishes a recreation for the public is subordinate. There are attendant evils, and sportsmen and lovers of the horse should be encouraged in their efforts to correct and eliminate them.

"But destroying racing as a public institution is not helping the community. Upholding it and doing it justice by passing intelligent criticism upon racing faults is right, and we should frown upon the bigot, whose gloomy pessimism would turn God's flowers of the fields to a monotonous gray."

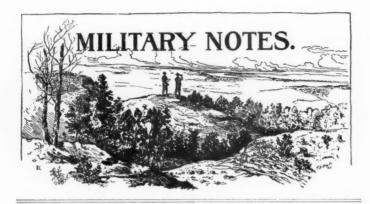
Mr. Belmont said the army is beginning to complain that it cannot readily find horses required for the cavalry.

"What would happen in case of war," he said, "if the cavalary had to be quadrupled, and instead of a good cavalry horse lasting ten years, as they do in times of peace, the remounts of the cavalry were lasting but sixty days, which, on good military authority, I am told is the average? Where would they come from?

"I told General Frederick D. Grant last November that I would present to the army six good stallions, and I am going to offer this year and next to whoever the Secretary of War indicates to me to be the proper recipient, Henry of Navarre, Octagon, two Rocksand colts and two from other sires. Added to this, I shall offer free use of my stallions in Lexington."

Henry of Navarre is a famous horse, one of the most famous in the Belmont stables. Knight of Ellerslie was his sire and Moss Rose his dame. Among the races for which Henry of Navarre will be remembered was his winning of the Suburban handicap in 1896. While he was running he brought many victories to the Belmont colors.

Octagon is estimated to be worth about \$20,000. As a youngster he came out as a remarkable two-year-old in 1906, and he was a great sprinter in the three succeeding years. He was by Rey d'Or out of Ortegal. Those who were about the tables figured that, with Henry of Navarre and Octagon, the two Rocksand colts and the two others Mr. Belmont had promised, the value of his gift would be in the neighborhood of \$120,000.



# A HIGH JUMP.

THE following extract from a letter from Captain Edward L. Anderson, the author of "Modern Horsemanship," "Horses and Riding," "Curb, Snaffle and Spur," etc., and who has always taken a lively interest in our cavalry, will be of interest to our readers:

"That mysterious packet which Captain-Commandant Crousse sent to me in your care, turned out to be some photographs of that splendid rider on his horse Conspiration.\* I have had one of these copied and am sending you an example that you may see what our officers are 'up against' at the London show. I am not afraid of Guy Henry or the others that we are sending, but I know that the horses against which they must contend are seasoned and well trained jumpers of first rate quality.

<sup>\*</sup>See photograph of Captain Crousse, on Conspiration, on page 722 of the Cavalry Journal for April, 1909.

"Conspiration must be at least twelve years old and his photograph shows with how much ease and grace Crousse and his charger are clearing seven feet, six and one-half inches. Of course Crousse is the champion, but Loenstein and many others are close behind him."



CAPTAIN CROUSE WINNING THE CHAMPIONSHIP OF ST. SEBASTIAN BEFORE THE KING OF SPAIN.

(Height of jump 2.30 meters.)

## THE SEAT AT OBSTACLES.

THE method of taking obstacles has been the subject of discussion at various times in the past few years in other countries as well as in our own. The fact that a particular individual may be successful at his jumps does not warrant the statement that his method is correct, and this could be carried still further by saying that the method of any particular country, however generally it be practiced in that country, is also not

sufficient to carry conviction as to superiority. In spite of the marked success of the Britishers at Madison Square and at Chicago it was clear to those who saw the riding and to those who examined photographs of the competitors of the several nations that the Britishers were not the best riders. They did, however, have horses that were superior to those of the other countries and they were well trained as a whole.

The practice of the Italian officers, the hunting field, the tendency of our own officers with increasing experience, and the seats of the majority of the best riders to obstacles wherever they be, confirm the wisdom of departing from the old custom of sitting vertical or of leaning backwards with legs thrust forward at jumps.

In recent years it is clear that Saumur has followed the method suggested in the article from Le Sport Universel, October 17, 1909, which follows:

"The full and complete utilization of the horse at obstacles is not in general practiced by our riders at Saumur. Many still keep up the old method of approaching the obstacle, that in vogue prior to 1900, which consists in maintaining the body at least vertical and more often leaning back, in not unloading the loins of the horse, and in maintaining one's own back horribly bent, the legs three-quarters of the time extended to the front with no point of contact with the saddle except the length of the thighs. This manner of jumping (be it understood with horses which are well trained and do not have to be carried to the obstacle), takes away from the mount a third of its strength and in racing makes him lose two lengths at each obstacle. It takes away from the rider all his suppleness and compels him to disastrous grabbing of the reins on the race-course and even in the horse show ring. Moreover, it does not give him an ounce more of solidity on landing when the horse is collecting himself.

"Let us suppose that our riders train their horses first over small obstacles, then over medium ones on the longe, then mounted; let us suppose they give their horses the habit of jumping and the necessary freedom which are the A, B, C of the profession, and the active equitation of which Captain Feline has spoken; finally, let us suppose them with stirrups somewhat short, adopting a method infinitely easier and more practical, therefore better than the old one,—then we would see obstacles taken that are unknown in the magnificent riding halls of Saumur,—obstacles of the type Caprilli, that extraordinarily clever and very advanced founder of the Italian method."

Probably the seat most to be commended for obstacles may be described as the one which requires the rider to be well down in the middle of his saddle, firmly gripping his mount with the calves of his legs and knees, body slightly forward, and hands down. That seat should not involve rigidity of body, yet the hold on the horse should be so strong as not to bump him on landing. Under no circumstances should the horseman fail to give his mount full and complete immunity as to his head while jumping.

H. T. A.

# EFFORTS TO IMPROVE THE ARTILLERY HORSE IN FRANCE.

DEPORTS have frequently been made on the work of the National Society for the Encouragement of Army Horses. The work of this Society, though not intentionally, has been very largely devoted to the improvement of the cavalry horse acquired for the army. The "National Harness Horse Society" has now entered into the same field, with four competitions and prizes looking to the improvement of the draft horse for artillery. These competitions or horse shows are reported to have had a very real success, both in regards number of horses shown, their quality and encouraging results. Some of the trials were rather original, for instance, horses were required to go in harness three and one-half miles at rapid gaits, not only on roads, but over ploughed ground, fields, up steep slopes some of them one on five, hauling a minimum of 1,000 pounds. The same horse, immediately afterwards, would be saddled and made to trot and gallop over rough ground These tests are said to have met with a great deal of approbation on the part of buyers, not merely for the army, but for general purposes. It was remarked that after having seen a horse tested in this way, a man ought to know what he was buying.

About a year ago the Minister of War instituted a series of very extended tests to determine the qualifications of a good artillery horse. The results of these tests were published in the Revue d'Artillerie. The most salient point brought out seems to have been that the big horse, the one frequently heretofore

preferred for artillery, could but rarely hold his own in a severe competition over all sorts of ground with the rather small, thick-set, sturdy beast which won the honors of most of these trials.

These competitions seem to have served to indicate the model of horse most likely to do good service in the artillery. The Harness Horse Society is doing all it can to stimulate the raising of draft horses of this model. The army will benefit by their efforts as well as the horse raisers.

T. B. M.

#### HORSES FOR OUR CAVALRY.

WE have been furnished with copies of two letters written to a horse breeder in Pennsylvania which show the lively interest that the War Department authorities are now taking in this question, which is of such vital importance to our Cavalry. They are given herewith below:

Dear Sir:—The Chief of Staff has fully expressed my views in his reply to you. The ideal hunter is the top-notch charger. Perhaps the views expressed by Lieut. Col. Lockett and Major Foltz, both of the Cavalry, regarding the clean bred horses they inspected at Mr. Thomas Hitchcock's farm on Long Island might be interesting in this connection:

"We first inspected a lot of young thoroughbred horses, ranging in age from yearling to four years old, with a view of determining whether the disposition and conformation of these horses were such as to make the type suitable for Cavalry practice.

"We found the horses remarkably gentle, docile and intelligent, of powerful and splendid conformation and perfectly suitable in every respect for Cavalry service. Of course, the cost of such animals would make it out of question for the Government to purchase these as mounts for the Army, but sires and dames of this type might be purchased by the Department of Agriculture, and so distributed as to introduce the type into the various horse-breeding sections of the country."

Naturally we cannot find, and do not expect to get, such extraordinary animals as the ideal hunter and horses such as some of those included in the number mentioned by these two

gentlemen, but the officers of the mounted service should always keep in mind a high standard type towards which their energies should be devoted. The Government would indeed be fortunate if it could secure half-breds of good temperament and conformation. A number of years will be required to bring that about.

In 1897, Count Lehndorf informed me that in seven years he had succeeded in increasing the blood (thoroughbred) in the horses of the German Cavalry by only about 10 percentum.

The horse that will suit the Cavalry will also be a most useful animal for nearly all farm purposes. It seems to me, therefore, that breeders would find a general demand in addition to the Government market for their young horses of the type described, and would be justified in breeding to it.

Very truly yours,

H. T. A.

# R. P. McGrann, Esq., Lancaster, Pa.

Dear Mr. McGrann:—Replying to your communication regarding the most suitable horse for Cavalry purposes and the best way of breeding such animals, I beg to state that the primary considerations in the Cavalry horse is the capacity to carry considerable weight over rough country for a long period and oftentimes at a rapid pace.

The first condition elminates a very light horse; the second and third require activity and endurance; and the fourth necessitates some speed. It is clear that certain types must be wholly eliminated and that suitable animals are to be found now in large numbers in very few localities in our country. This fact causes this Department to take the keenest interest in the subject of breeding service horses. The temperament of these animals is hardly less important than either of the essential attributes suggested above.

The principally recognized breeds of this country—Standard, Morgan, Hackney, Saddle—as is well known, are largely indebted to thoroughbred ancestry for some of their most noteworthy traits. This fact helps to confirm the opinion that good,

big graded mares, almost regardless of predominating strains, when crossed with selected thoroughbred stallions, should produce fairly good Cavalry horses. Probably the highest type of a charger would result from crossing a large thoroughbred mare, of excellent temperament and of big bone and muscle, with a stallion of similar qualifications. The Government cannot expect to secure such progeny as that would assure in sufficient numbers. The type of sire, however, crossed with good graded mares should give satisfactory mounts, and in general horses of much farm usefulness. If that policy of breeding were adopted by the farmers, in the course of a few years the Government would be able to secure enough young horses of a proper type to satisfy its peace requirements.

The following gives you a notion of what is now demanded of the service horse owned by officers:

Suitable mount (charger) as published in General Orders No. 125, War Department, 1908, is hereby interpreted to mean a horse with a minimum height of 15 hands, 2 inches and with a minimum weight of 1,000 pounds. The horse should be of good appearance and of such breeding and substance as will enable him to carry his owner over jumps of reasonable stiffness, including hurdles, ditches, fences and other obstacles simulating those which ordinarily would be met in going cross country.

Thanking you for your patriotic interest in improving the horses of the country, I am,

Very truly yours,

(Signed) LEONARD WOOD.

L. P. McGrann, Esq., Lancaster, Pa.

#### THE REVOLVER.

IN RE COLONEL GEORGE L. COWAN'S LETTER TO THE SECRETARY OF WAR.

THE revolver is pre-eminently the arm of the officer and of those who carry no other shooting weapon. If our troopers did not have a good repeating rifle, which is better for mounted work in large bodies than the revolver and equally as good in small detachments, it would be necessary to keep the revolver for all. For individual work, such as falls to members of patrols, many claim that the revolver is a peculiarly fit weapon. To meet that condition the revolver should be left in the hands of officers, of non-commissioned officers and of trumpeters.

The revolver served the Confederates well in a number of charges. They did not have a repeating rifle such as our present one. For horseback work this rifle would easily be the equal of both fire arms carried in the Civil War.

In all the Confederate charges it is clear that the horse was the principal weapon, and with the boldness displayed by Forrest, Stuart and Mosby on various occasions, even a good club in addition to the horse would have been highly effective. Frederick the Great absolutely prohibited the use of fire arms mounted. He compelled his troopers to rely entirely upon their horses and sabers. It has been claimed that out of twenty-two successful battles fought by him, fifteen were won by his cavalry.

In numerous ways we have departed from the practices of the Civil War. It is true we came out of that War with three weapons for the cavalry; we also came out of that great struggle with what are known to have been antiquated organizations and arms for all branches of the mobile army. The cavalry alone has retained its archaic organization and its equally out of date armament. We are still at variance with the best practice of all the rest of the world as regards cavalry armament and organization. In spite of the intimate knowledge possessed by military nations of the achievements of the revolver in our Civil War, not one has seen fit to adopt it as an arm for its troopers. These nations have, however, recognized theoretically and practically the lessons learned from that War in regard to the use of one good fire arm for mounted troops—an arm that can be used both on foot and on horseback.

Considering all the circumstances connected with Colonel Cowan's service, the proportions of the engagements, the stage of development of the troops, the availability of various arms, his statements regarding General Forrest—"killed at least half a dozen men with his saber," "General Forrest himself thought highly of the saber," etc.—and the description of the engagement at Plantersville, wherein he says one volley with the carbine "emptied about twenty saddles," it would not be illogical to deduce from his letter that repeating carbines and sabers are the best weapons for our mounted service.

General Wesley Merritt confirms General Forrest's estimate of the saber in the following language:

"The pistol, in one form or another, is as old as gunpowder. Is it not strange then if all that is now said of it is true, that some little of its merits have never been known before? Mind you, I am not prepared to say that much that our essayists have written is not true, but I beg of these gentlemen, for the sake of their own cause, not to attempt to discredit a weapon (saber) whose record is a blaze of glory, by an arm (revolver) whose single exploit dates back to the Civil War, and whose one title to effectiveness is the massacre of a party of unskilled, undrilled volunteers by a band of Confederate 'irregulars'."

The following by Colonel William Brooke-Rawle, who participated in the Rummel's Farm attack by Generals Hampton and Fitz Lee, shows that the saber was gaining adherents over the revolver as the war progressed:

"The orders of the Confederate officers could be heard, 'Keep to your sabers, men, keep to your sabers!" for the lessons they had learned at Brandy Station and at Aldie had been severe. There the cry had been, 'Put up your sabers! Draw your pistols and fight like gentlemen'."

It is no longer a question between saber and revolver, but a question as to whether cavalry, in such large bodies as future wars will demand, should have two modern fire arms. The present contention is: the modern rifle or carbine is for mounted fire in large bodies superior to the revolver; for other mounted work it is by and large the equal of the revolver; while for action on foot it is absolutely indispensable. Our present policy of having two shooting weapons is, therefore, unnecessary, burdensome, and expensive.

Officers, non-commissioned officers (sergeants at least) and trumpeters should have revolvers, but not carbines or rifles.

X

#### POLO IN THE ARMY.

To The Editors:

Knowing that the subject of Polo is an interesting one to most of your readers, I am taking the liberty of suggesting the publication of photographs of model Polo horses of the different army polo teams.

I am enclosing a form which we use here for registering

all polo horses of members of our polo club.

If you care to use any of our set of photographs, I shall be glad to lend you the same from which you may be able to select interesting types.

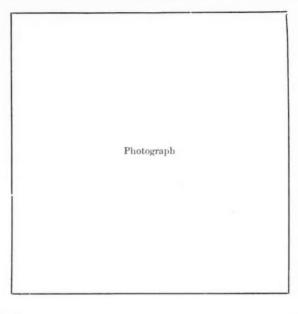
F. B. Hennessy,

Captain and Comissary Third Field Artillery,

Polo Manager.

#### POLO HORSE DESCRIPTIVE LIST.

Name of H	lorse		Name	of Owner	r			
Purchased								
From whom			When			Where		
Sex	Color	Ageye	ears. Hei	ghtH	lands.	Weightlbs		
Proodor		Siro		T	lam			



Registered ..... Polo Manager.

The *Editor* will be glad to receive and publish cuts of horses not only that are suitable and typical polo ponies but also of other horses that are believed to be those best suited for troop horses and officers' chargers. This for the purpose of obtaining the views of our horsemen as to the best types of horses for service and sport and of conveying their ideas to our readers. We hear many conflicting statements as to the relative merits of the Virginia and Missouri horses to be seen at the Fort Reno Remount Depot and as but few of our mounted officers are able to inspect these horses personally, photographs of the best of those from different sections of the country would be interesting and instructive.

The following from the *Daily Express* of San Antonio will be of interest to our polo players:

"The Third Field Artillery polo team was given the hardest fight it has had this season yesterday afternoon on the

Lower Post parade at Fort Sam Houston. After a fast game, in which each side used subs, the Artillery defeated the Free-booters by the score of 9 to 3.

"The game was marred by an accident to Dr. J. A. Edmunds, the veteran polo expert, who played awhile with the Freebooters. In a collision nearly in midfield his horse fell with him. At first he was thought to be severely injured, but he was able to walk from the field, having nothing more serious than a twisted right shoulder and a general shaking up.

"The game was a full one of eight periods, and it was fought hard all the way. The Freebooters team played far better than it had ever before, Noland and Meadows in particular showing improvement. The Artillery had a shade the better of combined play, and in this manner was their game won. The line-up:

Artillery (9). Freebooters (3).

We have received inquiries from a foreign publisher for the names and addresses of polo clubs in the United States Army and will be pleased to receive the same from managers or the presidents of such clubs.

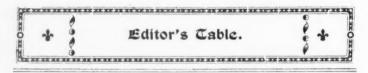
## INCIDENT IN AN ARGENTINE RIDING SCHOOL.

## From the British Cavalry Journal.

"When visiting the barracks of a cavalry regiment in the 'Argentine Republic recently I was shown a recruits' ride where they were taught to ride over a series of jumps' without reins or stirrups. In order to show that they were not losing their heads with the strain of riding, they had to keep shouting aloud the theoretical training which they had imbibed that morning.

"One recruit was galloping around shouting, 'The Republic has as its President the distinguished Senor Don Porro.' Just then his horse hit a fence hard and rolled over, but the gallant recruit, as he turned a 'cart-wheel' in the air, went on to shout, 'And the name of the Adjutant General of the army is Aguirra.' And as he sat up, finally landed, bruised and dizzy, he was still heard crying, 'And the colonel of the regiment is Marco di Palo.'

"R. S. S. B-P."



# CAVALRY TRAINING AND ORGANIZATION.

THE article in the March number of the CAVALRY JOURNAL on the subject of cavalry training and target practice and the two comments thereon have attracted much attention from our cavalry officers, and many deem it the most important question that has been discussed in the JOURNAL for many years.

Herewith below will be found extracts from some of the letters received upon this subject and other kindred matters:

"The March number of the JOURNAL was received this evening and I wish to say that this number has given me hope that there is really to be something done about getting rid of the infernal infantry rifle and all the trouble that it causes.

"In my humble judgment the comments on Captain Booth's article itself should be agreed to heartily by every officer of cavalry. To my mind these gentlemen have told the truth, and it is a source of a great deal of pleasure to read these articles, for I have been preaching these very ideas for some time. Please say to the officers who wrote these comments on Captain Booth's article that I congratulate them, and him also.

"I also think Captain Short's article should be read and remembered by all cavalrymen and that we should see to it that the Mounted Service School is kept up along these lines.

"Major Mott's article is splendid and every cavalry officer should read it.

"This is as far as I have read this number, but there are enough to animate the true cavalry spirit in any one having a spark of it in him and I simply had to stop to inflict this hasty note on you.

"This is not meant for publication, but is just to let you know that I appreciate your work and judgment in the selection of articles for the JOURNAL and to place myself on record as being in line with the spirit and desires of the writers of the articles mentioned."

"It is a source of much satisfaction to know that the officers at Leavenworth are giving the cavalry branch special and earnest consideration. It is quite probable that we are on the eve of some valuable and rapid strides in the improvement of our arm. It is to be hoped that by the time the next Congress convenes we will have adopted a well-rounded policy for a proper mobile army, in which the cavalry will receive a modern organization. The armament, I trust, will be settled before that time arrives; in fact, the Cavalry Board ought to be in possession of a decision now in order that it might be prepared to make the necessary recommendations as to equipment, adjustment of weight, etc.

"Besides organization and armament, the question of the stationing of cavalry is now to the fore. As you know, strategic reasons and economical considerations have had far less to do with determining our stations than political exigencies and concessions. In my opinion, we have gone decidedly far in the direction of time given to target work as suggested in Captain Saxton's paper. I very much doubt, however, whether, under the prevailing sentiment in all countries in favor of a cracker-jack long range weapon we could now successfully advocate a carbine, but it seems to me, however, that a discussion of this matter in the Cavalry Journal would be opportune.

"We are accomplishing certain matters administratively that have considerable bearing on the mounted branch. For example: in the orders to be published at a very early date, a description of a suitable mount and also a description of the cavalry seat such as conforms to the best modern usage. The value of a remount station continues to show that its conception was most wise and beneficial to the service. We hope that the same may be said of the training that these new horses will get

when they arrive at the various posts. The establishment of a field officers' course at Fort Riley, to take effect April 1st, ought also to have a very far reaching effect on the mounted service. All in all, there is reason to believe that some headway is being made, but it is altogether too slow and we are handicapped by the most fundamental of all things connected with our service—an archaic organization."

"In re Leavenworth Plan.

"This is most interesting. The professional zeal is indicative of a progress that all of us keenly desire.

"The fundamental requisite to success in the direction indicated is a *cavalry* organization—not an infantry one nor a three-fourths (three battalions of three troops each) infantry one. Upon that all of us should unite, for as soon as it be attained the rest of the Army, as well as ourselves, will take the cavalry for what it should be—'a special corps belonging to the Army.'

"All the other improvements are unimportant as compared with this in bringing out the special corps idea.

"From various cavalry sources a composite opinion is left of an unnecessary backwardness in proclaiming, or rather in stating, our requirements. There seems to be a conflict between timidity and cold reason cloaked under what might be called policy or political exigency. This is shown by the modest drafts of proposed reorganizations for the cavalry and the unpretentious measures suggested for its advancement. Possibly the timidity may be army conservatism, a characteristic which thrives when rank and responsibility are not commensurate with age. It is not fair to the Service nor just to Congress to advocate any measure that falls short of what theory and best practice declare correct.

"In spite of our wonderful cavalry experience in the Civil War, we should not rest complacently on the organizations and armaments with which we emerged from that great struggle. Barring the cavalry, the organizations and armaments of the rest of the mobile army have been largely changed. We emerged from the Civil War with many ideas that have weighed heavily

upon our military efficiency by delaying acceptance of modern methods. Surely our aim should be up-to-date policies and measures, and in arriving at them we must be influenced by the best practices of progressive and aggressive nations. If all the nations of the world, including Oriental ones, adopt practically the same organization and the same armament for the same branch, it is not a chance measure, but should be highly suggestive to us. To say that American terrain and American tradition and character differentiate us from all other nations to such a degree as to demand a radical departure from universally accepted practices is a reflection on our judgment.

"It is a fact that no nation has a cavalry regiment consisting of more than six troops (most of them smaller), and no nation gives its mounted men more than two weapons each. If the above premises be sound, then Army conservatism rather than reason is dominant when regiments of more than six troops and more than two weapons for troopers are advocated.

"Frederick the Great was enormously successful with his cavalry, yet he forbade it using any whatever fire arm. Under changed conditions all the world has seen fit to give its cavalry one shooting weapon—a long range one; but no nation except our own has seen fit to provide two shooting weapons for its troopers.

"It therefore follows that as to armament and organization of cavalry all other nations of the world are wrong. If this last statement be correct, then we are right; if it be incorrect, then we are wrong, in which case we should use our most earnest efforts to change our system of organization and armament."

# WASHINGTON AND CAVALRY.

REFERRING to the article, under the above title, that appeared in the January, 1911, number of the CAVALRY JOURNAL, by General Charles Francis Adams, we have received from Lieutenant G. C. Thayer, First Troop Philadelphia City Cavalry, copies of correspondence had by him with General

Adams regarding the statement made in that article that Washington had no cavalry in his army during the campaign of Trenton and Princeton.

The following are extracts from this correspondence:

#### LIEUTENANT THAYER TO GENERAL ADAMS:

"I have read with much interest your article recently published in the Cavalry Journal concerning the absence of mounted troops with Washington during the Revolutionary War.

"I desire to call your attention, however, to what is apparently an error in your article in the statement that Washington had no mounted troops with him during the battles of Princeton and Trenton.

"The First Troop Philadelphia City Cavalry, then known as the 'Philadelphia Light Horse,' under the command of Captain Samuel Morris, accompanied Washington's Army during this campaign and took part in the above mentioned battles.

"The Troop regards with particular pride its record in this campaign. The original Troop standard carried during that period is at present in the Armory, as well as a portion of a Hessian flag taken from a body of Hessians whom they captured during the battle of Trenton.

"In January, 1777, the Troop received an autograph letter from General Washington, thanking them for their services. The original of this letter \* \* \* is at present in possession of one of the descendants of Captain Morris. \* \* \*

"I enclose for your information a fac simile of this letter."

#### GENERAL ADAMS TO LIEUTENANT THAYER:

"I do not recall that I had said that Washington had with him no mounted troops at all during the affairs of Princeton and Trenton. If, however, I did make any such statement I at once accept your correction. In the different accounts I have read of those operations I had come across no mention of the presence of mounted troops of any description. In fact, during the whole of Washington's operations, from Kips Bay in early September down to the Trenton affair in January, I do not recollect a single reference to cavalry as cutting any figure in what occurred.

"I am, therefore, under the impression that the Philadelphia Troop must then have acted as a species of headquarters escort, or what might be termed a body-guard for Washington in person. That as such it did escort and orderly service, and was repeatedly more or less under fire could not admit of any question. I should like further evidence, however, that it was ever engaged in what are known as cavalry warfare.

"The first suggestion of such warfare I have come across is in the case of what was known as Pulaski's cavalry at the battle of Germantown. Then for the first time this arm of the service had been brought under the command of what might be considered a cavalry commander. Both previously and then the cavalry organizations had been largely divided up under the immediate direction of those in command of divisions of infantry.

"It was during the Valley Forge winter that the first attempt was made towards a distinct cavalry organization, proposed to be used as such.

"I am now engaged in preparing a paper on the subject to which you refer, as part of a volume of Miscellaneous Papers, and if I am in any way in error as to the above, I should like to be advised thereof, and also have my attention directed to sources of information which have escaped me."

# FAC SIMILE OF WASHINGTON'S LETTER:

The Philadelphia Twep of Light House under the command of Captain Mours, having performed their Tour of duty are discharged for the fresent -

Make this Opportunity of redirming my most suncere thanks to the Captain and to the Gentlemen who convious the Troops, for the many effectual Terrices which they have rendered to throw fountry and to me personally during the fourse of this fevere Campaign. This composed of Gentlemon of Tostune, they have thewn a noble Example of discipline and Jubordination, and in feveral actions have there a Spirit of Bravery which will true do Honor to them. and will ever be grate fully remem took by me.

Given as Head Quarters at Mones Town this 23 d Jan y 1777.

Happington

#### REORGANIZATION.

THE CAVALRY JOURNAL wants some well thought out papers on this timely subject.

Our cavalry, besides differing from that of all other armies in methods and training and in the lack of attention given to the horse and to horsemanship, differs from all others in organization.

Long dissertations on what "I think" with little or no basis therefor are not of much use, but deductions from cavalry history, except that confined to Indian or partisan warfare, or based on the principles enunciated by great cavalry leaders or cn a consensus of the opinions of all other nations, modified to agree with our political and other conditions, are greatly needed.

Below are some of the points which need careful study by the officers of our arm:

1. The number of units most suitable in the troop, squadron and regiment.

In large commands the three unit system meets tactical requirements. In the regiment and smaller units, the three unit system makes it practically impossible to go into mounted action except in three lines of equal strength. The necessity for our present organization is usually stated to be because it is more suitable for dismounted action. A dismounted squadron has about the same number of rifles as a foreign company. No foreign battalion is made up of three companies.

For the work of the contact squadrons about 200 sabers makes the most suitable force for each road. Both theory and history shows that to be true.

2. The necessity for a "home squadron" and localized recruiting.

We once tried or alleged to have tried having "home squadrons" and soon gave up the experiment. Abroad they are universally used. Localized recruiting and a sort of permanent home station have many points of superiority over our present lack of system.

3. Hand in hand with the second proposition goes the

necessity for in peace devising some means for recruiting men and horses in time of war. If the localized recruiting district and home, or better "training," squadron is not to be used, what can we devise as a practicable measure for keeping our cavalry up to efficient strength in time of war?

- 4. Strength of our regiments. Foreign regiments are much smaller than ours but are gradually increasing in size.
- 5. The rank of officers. Nearly all reorganization schemes are devised to give promotion to some one or more officers. Can we not consider this question on the basis of the best arrangement for promoting the fighting efficiency of our cavalry? Foreign squadrons are commanded by captains. The squadrons are made up of platoons under the command of lieutenants. These squadrons are smaller in size than ours but larger than our troops. Between the platoon and the regiment is one intermediate organization instead of two as with us. Foreign infantry battalions are commanded by a major. His command can put about the same number of rifles on the firing line as our regiments. He can at least put on the firing line twice as many men as can our battalions. So parallels in rank of foreign commanders are not to be obtained in either arm. Independent of jealousies as to rank or promotion what is the most useful organization in respect to officers? Considering, as we must do, their jealousies, etc., what is the most suitable arrangement for us?
- 6. Machine gun troops. Should they be troops as our organization now makes them or should there be only a platoon? Or, should they be armed with a very light weight machine gun and one or two with a pack horse of ammunition be a permanent part of each squadron?

This question of reorganization of our cavalry is going to come up in the near future, possibly before the next Congress, and it behooves our cavalry officers to consider it fully and, if practicable, settle in their own minds what is wanted or needed to put the cavalry arm on a basis of fighting efficiency.

We have many capable officers who are able to intelligently discuss this matter and it is hoped that they will "get busy" and let us have their best efforts in this line. The Executive Council will pay for good articles under this head.

#### BOOKS.

"Of the making of books there is no end."

A S has been noted several times in the CAVALRY JOURNAL, our Book Department was organized with the sole end in view of supplying our members and subscribers with the best and latest military books at the lowest practicable cost to them and with no idea that it was to be a money-making business. Of course, it was not intended or expected that the Association would lose any money in the business but, at the same time, it was the intention to make only enough profit to pay for the extra clerical work that it would entail and to insure the Association against loss.

With the above object in view, the prices of books published by the Association were fixed as low as would clear the Association in a reasonable length of time and, after paying all expenses, return a small profit. Also, in selling books published by others, the discounts obtained have been divided between the Association and the purchaser in case the latter is a member of the association or a subscriber to the JOURNAL. In other words, we have a lower price for our members and subscribers wherever our contracts with authors and publishers do not prohibit such lower prices,

The Secretary of the Association is willing and anxious to serve our members and subscribers in looking up the best and latest books on any subject, military or otherwise, and has in the past been of service to many in this line. Scarcely a day passes but that some inquiries are made regarding the latest and best authorities on certain particular subject or to quote prices on certain lists of books.

In addition to supplying books, the Association has recently arranged to place orders for subscriptions for periodicals of all kinds and the business in this line has been no small item. Many troops have availed themselves of this opportunity to order their subscriptions through us, and, it is believed, to their satisfaction as well as profit. We are prepared to quote prices on nearly all foreign military periodicals and to supply them at the lowest possible cost.

We have recently published two books that are attracting attention and which should be in the hands of every reading officer. The first of these, while being a cavalry book, yet is of enough general interest to the officers of the other branches of the service, especially to those who keep up with the operations of all arms, as to be of use to them also. This is Captain Gray's "Cavalry Tactics as Illustrated by the War of the Rebellion" which is a peculiar book in many respects. It is made up from extracts from reports and accounts, taken principally from the Rebellion Records, of cavalry engagements during the Civil War and the author's comments thereon. Each extract shows the source from which it was taken and on the margin are notations showing when and where the battle or engagement took place and short, pithy remarks as to what it illustrates.

The reviews and notices of this book have been flattering and there is no doubt but that every cavalry officer of our service should have a copy of it.

This is Part I of the complete work that Captain Gray expects to bring out. He writes that the third part is ready for publication but that it will be impossible to complete the second part until he returns to the states where he can have access to the necessary maps and books of reference.

The following is an extract from a review of Captain Gray's book that appeared in a recent number of the *United* 

Service Magazine:

"The author further considers that there is no modern accepted principle of cavalry tactics which was not fully illustrated in the American Civil War, and that no subsequent campaign has added, in any respect, to the cavalry tactics therein daily applied. Captain Gray then gives a brief history of the crganization and armament of the United States Cavalry and devotes the remainder of the book to the brief enumeration of the examples of cavalry operations taken from the Records—for the most part Federal—of the War of the Rebellion and especially from the opening of the 1863 campaign, when the Federal cavalry was beginning to emerge from what may perhaps be described as its novitiate.

"This purports to be Part I of a larger work, of which

the second portion—'the troop-leading of cavalry'—is to illustrate the decisions based on the principles here shown."

The other is that of Krueger's translation of the first volume of the fourth and latest edition of Balck's Tactics. Those who are familiar with the previous editions of this work, which is a standard authority in Europe as well as in this country, know that the original is in six volumes and covers all the principles of tactics throughout its various ramifications.

This first volume is entitled, "Introduction and Formal Tactics of Infantry" and while, as its title indicates, it is devoted mainly to the tactics of infantry, yet it deals with general tactical questions that should be known by all officers, especially the chapters devoted to "Infantry vs. Cavalry" and "Infantry vs. Artillery."

The second volume of this work is now being translated and will be published in the near future. It relates to the subjects of the tactics of Cavalry and Field Artillery.

We have under consideration the question of publishing the translation of this second volume serially in the CAVALRY JOURNAL, or at least that portion of it relating to cavalry, and later in book form. Also, it is just possible that the Journal of the Field Artillery Association, when started, may publish the part relating to that arm.

Throughout Colonel Balck's work, he illustrates every principle laid down by what was done, or should have been done, in different wars and comments freely upon the actions in the Russo-Japanese War, the Boer War, as well as others, and illustrates the changes in tactics by the experiences gained in these wars. He also tells what is considered the best tactics of all other armies and draws freely from their Field Service Regulations.

# THE AMERICAN RED CROSS.

THE American Red Cross announces, in connection with the International Conference of the Red Cross which will be held at Washington, D. C., in May, 1912, that the Marie Feodorovna prizes will be awarded.

These prizes, as may be remembered, represent the interest on a fund of 100,000 rubles which the Dowager Empress of Russia established some ten years ago for the purpose of diminishing the sufferings of sick and wounded in war. Prizes are awarded at intervals of five years, and this is the second occasion of this character. These prizes in 1912 will be as follows:

· One of 6,000 rubles.

Two of 3,000 rubles each.

Six of 1,000 rubles each.

The subjects decided upon for the competition are:

- (1) Organization of evacuation methods for wounded on the battle field, involving as much economy as possible in bearers.
  - (2) Surgeon's portable lavatories for war.
- (3) Methods of applying dressings at aid stations and in ambulances.
  - (4) Wheeled stretchers.
  - (5) Support for a stretcher on the back of a mule.
  - (6) Easily portable folding stretcher.
- (7) Transport of wounded between men-of-war and hospital-vessels, and the coast.
- (8) The best method of heating railroad cars by a system independent of steam from the locomotive.
- (9) The best model of a portable Roentgen-ray apparatus, permitting utilization of X-rays on the battle field and at the first aid stations.

It rests with the jury of award how the prizes will be allotted in respect to the various subjects. That is to say, the largest prize will be awarded for the best solution of any question irrespective of what the question may be.

Further information may be obtained by addressing the Chairman, Exhibit Committee, American Red Cross, Washington, D. C.



Organization.\* To give our readers an idea of the contents of this admirable book, it is only necessary to quote the first paragraph of

the author's preface: "The author was led to compile this account of Army Organization owing to his inability to discover any book dealing systematically with that subject. Military writers do, of course, make frequent allusions to organization, but a previous acquaintance with the subject is generally assumed. One looks in vain for an explicit account, either of the principles underlying organization, or of the development of its forms or methods." Part II of the book describes the organization of the British Army in considerable detail. The appearance of the opinions of the distinguished author at this time is very opportune, for the principles enumerated by him, and backed up by eminent authorities, should be carefully studied by those in our own service who may be concerned with a proposed reorganization of our cavalry. It is not going too far to venture the opinion that we now have a most desirable organization for United States Cavalry, as tested by certain principles well set forth in this book. That continental nations have not such an or-

<sup>&</sup>quot;Organization: How Armies Are Formed for War." By Colonel Hubert Foster, Royal Engineers. Hugh Rees, Ltd., London, 1911.

ganization, and that they do not advocate it for themselves, is due, more than likely, to the fact that they cannot *afford* it, and not to the fact that they do not recognize it as desirable.

This is a book that every officer of the army should read and thoroughly digest the principles therein contained. Those concerned with our cavalry organization might then conclude that what our cavalry needs is not reorganization, but a war strength of about eighty men per troop, maintained in times of peace as well as in times of war, thus obviating fifty per cent. efficiency by filling up with recruits and untrained horses at the very moment when 100 per cent. efficiency is most needed.

In Part II the author states that the British Army, just reorganized after a most careful study of the organizations of all the important foreign armies, and with the lessons of the recent large wars fresh in mind, is the best organized army in the world and gives his reasons therefor. This statement alone offers data for study and reflection, sufficient to impel the reading of the book.

S. X.

Yin-kou and San-de-pu.\* This, the fifth volume of the German Official Account of the Russo-Japanese War, was received for review some weeks since and turned over to the officer who has written

the reviews of the four preceding volumes. Owing, however, to his absence with the forces concentrated on the Mexican border, he has been unable to furnish the promised review in time to appear in this number of the CAVALRY JOURNAL.

The following notice of this publication has been taken from the United Service Magazine for April, 1911:

"In this volume are contained accounts of operations which had no particular bearing on the result of the campaign, and

<sup>\*&</sup>quot;Yin-kou and San-de-pu. German Official Account of the Russo-Japanese War." Authorized translation by Karl von Donat. Hugh Rees, Ltd. London, 1911. U. S. Cavalry Association Sole Agent for the United States. Price \$3.00.

which were undertaken during the general cessation of hostilities consequent upon the exhaustion experienced by either belligerent after the ten days' fighting on the Scha-ho. The first of these operations was the cavalry raid under Mishtshenko —one which is of supreme interest because it is the first example in modern war of the strategic employment of cavalry outside its sphere of reconnoitering and protective duties, and of cooperation with the other arms on the battlefield; and there appears small doubt that much might and ought to have resulted had the raid been properly carried out, and had it been combined with the general resumption of the Russian offensive. But no steps were taken to insure secrecy—the raid had been openly discussed long before it took place; it was an isolated operation; while the main objective ought to have been the Japanese lines of communication, this—the interruption of the railway line-was practically abandoned in favor of what was a purely secondary object—the destruction of the magazines at Yin-Kou: and finally in the actual execution are noticeable a want of energy, a slowness of movement, an anxiety rather to keep open the line of retreat than to carry out the allotted task at all risks, and at whatever cost. The battle of San-depu was an attempt to employ the great numerical superiority of the Russians in the delivery of an overwhelming attack before the Japanese third army could reach the theater of operations. In this battle Kuropatkin had a balance to the good of something like 80,000 men, and the initial results of the fighting were on the whole favorable to the Russians. But the attack was halting and undecided; the Russian commander seemed throughout to be not so much bent on annihilating the enemy as on guarding himself from defeat; although the plan was good and the moment favorable, Kuropatkin's energy did not equal his intelligence; and a large portion of his fighting strength was permitted to lie idle. In this official account of the battle of San-de-pu, it is correctly described as an episode: but it was one which resulted in a wholly disproportionate number of casualties, and which again surrendered the initiative to the Japanese. The operations are described in great detail and the comments are very just; the maps are fully equal to those which have accompanied the earlier volumes."

Tenth Foot.\*

This is an interesting account of the services of the Xth Foot of the British Army from its organization in 1685 until the

present time.

Instead of briefly recording the services of the regiment, the author relates them in connection with the events of which they form a part, thus greatly enhancing the readability of the work.

Perhaps no other regiment of the British service, and certainly none of any other army, can look back upon more varied service than the Xth, which served in Ireland, Flanders, Canada, the United States, the West Indies, India, Egypt, Gibraltar and other Mediterranean stations, Straits Settlements, Japan, and South Africa, and fought at Blenheim, Ramillies, Oudenarde, Tourney, Malplaquet, Lexington, Bunker Hill, Mooltan, Goojerat, Luknow, and Omdurman, and participated in the Peninsular Campaign and the South African War.

To us, naturally, the most interesting feature of this history is that which deals with the part played by the Xth in our Revolution, in which the regiment participated in practically all the important engagements until reduced to only 39 men, according to the monthly return of the regiment for January, 1779, whereupon it was sent home to recruit. There is a striking similarity between the British policy of letting a regiment dwindle away until practically nothing was left of it and our own policy during the Civil War.

The work contains many interesting details in regard to recruitment, pay, bounties, uniforms and equipments since its organization.

Apropos of recruitment, a fac simile of an ancient recruiting poster is shown on p. 337 (Vol. 1), which is interesting as showing the conditions governing enlistments at the close of the 18th Century. This poster states among other matters:

"Let all those who delight in the honorable profession of arms, and disdain the drudgery of servitude, repair without

<sup>\*&</sup>quot;The History of the Tenth Foot (Lincolnshire Regiment)." By Albert Lee, Ph. B., F. R. G. S. Published for the Regimental Committee by Gale & Polden, Ltd., Wellington Works, Aldershot, England. Price 25s. net.

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#### LORD BURY TELESCOPE, \$25.

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Conroy's One-piece
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Covered Steel Cleaning Rod, \$1. Same
style of Cleaning
Rod, Jointed, \$1.25.
Brass Wire Brush
for same, 15c.
Bullet Micrometer
Calibrater, Price.
\$4.50

Micrometer, \$3.00.

Vernier, \$2.76.

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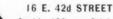
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By means of the adjustable top, which we supply, it is readily converted into a handsome Dining or Library Table, sold on easy payments. Catalogue showing different size of tables on application.

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"Spir'ted lads of size, character, and qualifications, may acquit themselves of all women \* \* \* and enter into the direct road to honor and preferment. \* \* \*

"God Bless the King nd Damn the French." \* \* \*

How the times have changed in the space of a short hundred years.

A implete list of all the officers who served in the regiment: e its organization with a record of their services is appended to volume two.

The work is well bound, printed in clear type and illusstrated with numerous cuts and pictures.

No greater compliment can be paid the author than to say that the regiment has indeed been fortunate in the selection of its historian.

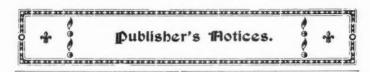
K.

Pferd.\* We have received sample copies of a new foreign periodical under this title, the first number of which was issued in December last. It is a semi-monthly that is devoted entirely to literature on the subject of the horse and is probably the only one in the world that is exclusively a horse magazine. It is edited by Oscar Fritz and published at Basel, Switzerland, on the 15th

It is said that the Editor, who is the "Kantons und Universitats Stallmeister," has traveled in England, France, Germany and Austria and knows all that is worth knowing about the horses of those countries and the men who breed and ride them. The magazine is well illustrated and, judging from these initial numbers, would be of great interest to those of our horsemen who can read German. The subscription price is nine francs.

and last of every month.





#### REVIEW OF REVIEWS COMPANY.

Attention is called to the advertisement of the CIVIL WAR PICTURES that have been reproduced by this firm. The originals were made by the famous photographer, Mathew Brady, who followed the army in the field during that war.

#### WARNOCK UNIFORM COMPANY.

This well known firm, dealer in military goods, again appears among our advertisers. It having been established in 1838, makes it probably the oldest firm of its kind in the United States.

#### ALEX. TAYLOR & CO.

This firm, dealers in ATHLETIC SUPPLIES, has been well recommended as one that has built up a reputation for fair dealing and reliability. They claim to supply "only the best."

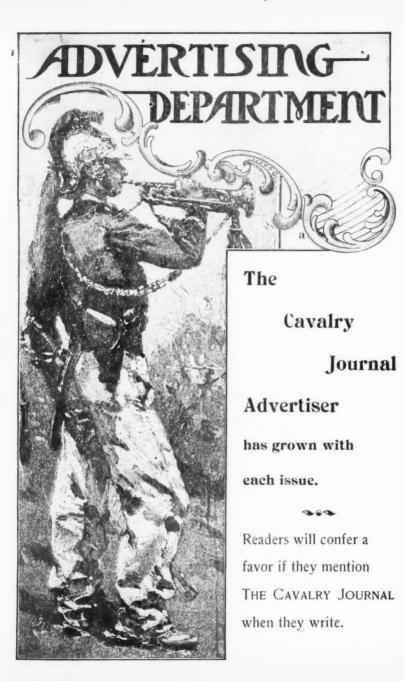
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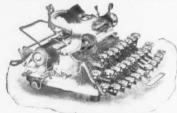
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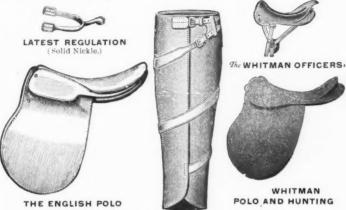
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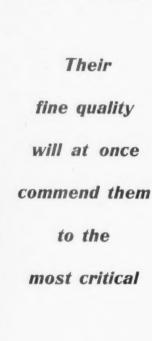
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